

MANUFACTURERS' RECORD

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BALTIMORE, MARCH 21, 1907.

GUIDED BY THE MANUFACTURERS' RECORD.

Mr. John Henderson, president of the Empire Machine Co. of Nashville, Tenn., who has been carrying a small advertisement in "Classified Opportunities," wrote, under date of March 9, as follows:

I beg to advise that the classified advertisement which you have been inserting for us has brought splendid results. We have run the same advertisement in a number of different papers and have secured better results from the MANUFACTURERS' RECORD than from any paper that has been running the advertisement.

Mr. Charles B. Cooke of Richmond, who has organized the Offley Mill Co. of Offley, Va., referring to a notice about his plant in the Construction Department, writes:

I have gotten letters from every manufacturer of the United States from the first announcement in your paper.

These letters, samples of many which are being constantly received, indicate the wide circulation, and, still more important, the close reading of the MANUFACTURERS' RECORD. Not only do the replies to these advertisements come from all over the South, but, likewise, from all over the United States, and a good many from abroad.

Mr. T. L. Peeler, industrial agent of the Missouri, Kansas & Texas Railway Co., writing from Dallas about the MANUFACTURERS' RECORD, says:

I find it to be full of news and interesting information very valuable to my department.

As with Mr. Peeler, so with many other railroad agents. The MANUFACTURERS' RECORD is found to be invaluable

able by those who are alert to the situation and alive to the opportunity of finding information about the South and its possibilities.

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 80, 81 and 82.

DEMAND FOR PORTLAND CEMENT.

In its issue of September 13 last the MANUFACTURERS' RECORD, reviewing the growth of the Portland-cement industry indicated by an increase in the output in 15 years from 335,000 barrels to 35,000,000 barrels annually, estimated that the output in 1906 would reach 42,000,000 barrels. A statement just issued by the United States Geological Survey shows that the 1906 output was 45,610,822 barrels. This statement illustrates the conservatism of estimates made by the MANUFACTURERS' RECORD, and, what is of greater importance, emphasizes the almost marvelous development of the industry. The increase in the output in 1906 over that in 1905, amounting to 10,364,010 barrels, was greater by nearly 2,000,000 barrels than the total output in 1900. The growth, though dramatic in many respects, has been a healthy response to perfectly natural demands for a re-inforcer in building operations and the consequent advertisement by cement of itself as a most desirable material for many kinds of structural work. How the thing grows is suggested in a dispatch to the Nashville American from Hartselle, Ala., stating that since the building of a large concrete warehouse there persons who were about to build dwelling-houses have substituted concrete blocks for wood, and that it is not unlikely that several business houses will be built of concrete shortly. But the use of concrete in building, either in the shape of blocks or reinforced with steel, is but one of its many uses. Portland cement is found, according to *Cement and Engineering News*, taking the place of other materials in drains, sewers and tunnels, in railroad ties and telegraph poles, in sidewalks, curbs and gutters, in chimney stacks, in fence posts, in flooring, either as a basis for tiling or in the tiles themselves, in roofing, in coal bins, grain-storage bins and elevators, in monuments and burial vaults, in standpipes, in water tanks, gasholders, tar reservoirs and vats, in piling for docks, in pier foundations, in water-ballast compartments of steel ships, in railroad-track elevations, in storage reservoirs and conduits. Hardening under water, Portland cement is a simplifier of engineering operations dealing with the construction of wharves, docks and waterways, and because of its staying and resistant qualities, its ability to withstand wind, floods and fire, its desirability from the standpoint of economy is becoming more and more widely recognized.

RIVERS AND HARBORS IMPROVEMENT A PRESSING NECESSITY TO HELP THE TRANSPORTATION SITUATION.

Transcending in importance every other business question before the American people is that of transportation.

We are at a crucial period when freight congestion and inadequate transportation facilities are the burden of the business man's life.

A great expansion of transportation facilities is vital to business expansion, to growth of trade and commerce and to the increasing wealth of agricultural, industrial and general business interests. Every man in America is vitally affected by this question, for it bears on every individual's business opportunities.

The development of the country has been more rapid than it has been possible for the railroads to meet, and yet we are only at the beginning of the real broad development of this wonderful land. Foreseeing this situation, the MANUFACTURERS' RECORD several years ago urged the vital importance of the National Government undertaking on a broad scale the fullest possible utilization of the rivers and harbors of the country, that water transportation might lessen the strain upon the railroads. At that time we made the suggestion that Congress should authorize an issue of \$500,000,000 of bonds, the proceeds to be expended as rapidly as possible in the deepening of our rivers and harbors. The suggestion met with a favorable response from many public men both in and out of Congress, but the country at large had not then fully awakened to the necessity of the matter.

It was then generally believed that the railroads would be equal to coping with the growth of business and that the National Government need not be called upon for so large an expenditure to make what was known to be a good thing, but which, it was thought, could be secured out of annual appropriations, making unnecessary so large an expenditure for immediate work.

The country now recognizes its mistake. It is now seen that the improvement of our waterways is vital to the progress and prosperity of every section, and instead of being antagonistic to the railroads' interests, is essential to their best prosperity. To provide the facilities needed for the growth of population and traffic in this country will tax the financial power of the railroads and of the Government itself. It is now everywhere accepted that it will take an expenditure of \$5,000,000,000 to fully expand and equip the railroads of the country to meet the needs of the times, and yet the National Government has expended in the last 10 years an average of only about \$20,000,000 on rivers and harbors, and will doubtless now halt and hesitate, unless backed by the overwhelming demand of the people of the country, in issuing \$500,000,000 of securities for river and harbor work, or one-tenth of what the railroads must do by private capital.

Every available means of transportation must be utilized, every river susceptible of improvement to such an extent as to furnish greater transportation facilities must be deepened or straightened, every harbor with which nature has blessed our country must be improved for larger ships and better shipping facilities.

The present congestion is not temporary. It will be the normal condition of the country, unless an expansion commensurate with the vastness of the resources of this country be made.

From the Atlantic to the Pacific and from the Lakes to the Gulf traffic is congested. Lumber men are unable to deliver their product, though eager buyers are scrambling for it; iron and steel interests are harassed by the inability to secure the raw material, and when they have secured that, by inability to deliver the finished product; the cotton growers of the South and the grain growers of the West, the cotton-mill man and the flourmaker are all alike harassed by the present conditions.

So great is the pressure upon transportation facilities that railroads would make more net profit if they had a smaller volume of gross business. Their lines are overworked, their rolling stock cannot be utilized to the best advantage, their terminal facilities are clogged, and the life of the railroad operator, from the president all the way down through every gradation of office, is a burden. Struggling to meet these overwhelming conditions, he is harassed by the insatiable demands of the business man who is striving to ship his freight, and by the still more insatiable and less reasonable demands of the politician, who thinks that legislation can by some magic wand transform this condition into one where every passenger train can be on time and every shipper can secure needed facilities.

In view of these conditions, the MANUFACTURERS' RECORD has undertaken the publication of a series of broad and comprehensive articles by eminent authorities on the importance and the possibilities of river and harbor improvement. These articles will cover the projected work, the necessity of which is realized, will cover the relative cost of transportation by rail and water, will point out the value of canals under construction and the feasibility of canals which have been talked about, will show what can be saved to the country and what can be made beneficial to the country's broadest upbuilding by a comprehensive improvement of rivers and harbors carried out promptly and without stint of money.

Upon the National Government rests a weighty responsibility. It is the

servant of the people. Congress is but the directory of the mightiest corporation on earth, that of the United States, and the people, who are the stockholders in this corporation, have a right to say to Congress that our rivers and harbors shall be utilized to the fullest extent possible, and that, too, without regard to whether the cost be \$500,000,000 or five times that amount. This country is rich enough not to be wasteful in foolish extravagance, but rich enough to carry out every great work of this kind which will add to the prosperity of all the people of all sections.

With this week's issue we begin the series of river and harbor articles with a comprehensive story by Congressman John H. Small of North Carolina on the inland waterway from Boston to Texas. Congressman Small has been the untiring leader in Congress working for this improvement, especially that portion of it in which his State is most concerned. The beginning has been made in an appropriation secured at the session just closed. This will be followed by a series of articles by Prof. Lewis M. Haupt, the distinguished engineer, of Philadelphia, widely known throughout the business world as one of the highest authorities of America on river and harbor work.

MUDDLED ABOUT PRINCIPLES IN SOUTHERN EDUCATION.

Some of the brethren, taking their cue, apparently, from a rather trivial comment of the *Biblical Recorder*, of Raleigh, N. C., are making themselves even more absurd in protests, more or less misleading, against an expression of regret on the part of the MANUFACTURERS' RECORD that "divers college presidents in the South who have long eyes upon that \$10,000,000 educational trust fund in New York city" do not hold the view of President Harrison of Bethel College, Kentucky, that "no college can afford to accept aid which will, in any way, tie its hands or mar its usefulness under its carefully-matured working plans." That comment was printed before the educational trust fund had been raised to \$43,000,000. The accretion only intensifies the correctness and soundness of President Harrison's view and our regret that it is not shared by divers college presidents in the South. The *Baptist Courier*, of Greenville, S. C., suggests by indirection that our comment was a charge that there are college presidents in the South "who are willing to compromise themselves, to smother their honest convictions and sacrifice principle for the sake of any contributions their colleges have received, or may hereafter receive, from Northern philanthropists and Northern educational boards and societies." This suggestion, which, on its face and in the light of its context, reveals its utter worthlessness as a subject of serious consideration, is followed by an editorial in the *Baptist Argus*, of Louisville, Ky., which is heartily tired of reflections upon "the motives and characters of these honorable college and paper men," and which seeks to be free "to discuss the principles and effects of the matters involved." It says that it does not believe what it calls the following charges:

The MANUFACTURERS' RECORD says, and sometimes with seeming bitterness, that the colleges and college presidents who take money from the General Education Board compromise themselves and even go a good way in sacrificing their principles. Then we have heard it charged that the MANUFACTURERS' RECORD has sold out its soul to the manufacturers and is seeking in their interest to so fence against the child-labor movement as to defeat it.

As to the latter charge we beg to suggest that the *Baptist Argus*, if it was acquainted with what the MANUFACTURERS' RECORD has published in opposition to legislation for the suppression of the evils of "child labor," would know that in that matter we have made a campaign for truth, the great principle and the great effect involved in the agitation, and it would not, even under the pretext of denying, have repeated the charge against the integrity of the MANUFACTURERS' RECORD, which charge is but a muddled reflection of

a weird conception absolutely shattered by facts.

Principles and effects, too, and not deliberate intent or desire of this or that college or college president, have been the objects which we have sought, in spite of sophistry and evasions on the part of promoters of the movement, to keep to the front in the discussion of the Educational Trust Movement, of which the General Education Board is at present the most prominent feature. As to the principles and effects involved in the campaign of the General Education Board and the scramble of Southern colleges to get into touch with its funds, we can do no better, for instance, than to refer the *Baptist Courier* and the *Baptist Argus* to their confrere, the *Biblical Recorder*, of Raleigh. Commenting, four years ago, upon the MANUFACTURERS' RECORD's "war on the General Education Board and its agent, the Southern Education Board," the *Biblical Recorder* ventured, with that rashness which occasionally mars its usefulness as a safe and sane exponent of public opinion, to say:

This General Education Board is not in the money-giving business. Here are two years going, and how much has it given? It has only a million—\$10 or less for every school in the land, and its field is the United States. This outcry against being pauperized is ridiculous to a man that has kept up with the movement, and it must be terribly so to the throngs of Southern (save the mark) schoolmen that, hearing of the organized propaganda of pauperization, etc., etc., rushed in to get themselves handsomely pauperized!

The *Biblical Recorder* was perfectly honest in giving vent to those expressions, for, at the same time, it made the point shared by not a few intelligent observers:

We have insisted that the Southern men on these boards are not prepared to represent either elementary popular education or higher voluntary education. We stand by that, and the Board will see that we are right.

If the *Biblical Recorder* had known, as men it criticized did, that the General Education Board was not as fatwitted as other folks that were following that movement, and that within less than four years it would be encouraging Southern school men to make a drive for a whack of its \$43,000,000, the *Biblical Recorder* would not have made the brash assertion that "this General Education Board is not in the money-giving business." However, it is a pity, in view of discussions about compromising one's self, sacrificing principles and smothering convictions, that the *Biblical Recorder* does not elaborate upon its topic of throngs of Southern schoolmen rushing in "to get themselves handsomely pauperized" and does not use the propaganda of the Educational Trust to emphasize the moral of its statement of April 15, 1903, an enunciation of principles as enduring as eternity:

As for receiving help, we confess that there is too much of dependence everywhere.

Self-reliance and self-respect and self-help have fled the country and made beggars of us all. Churches and schools are on the perpetual beg. We would have the South keep out of this. Let one spot remain in which tubs will stand on their own bottom and men can look men in the eye. Nothing so indicts our age as the clamorous crews gathered around millionaires and begging for endowments. As if endowments could make colleges!

In opposition to the clamorous crews gathered around millionaires and begging for endowments from the General Education Board, the MANUFACTURERS' RECORD, realizing that the beggar mind could hardly be expected to maintain any clear-cut notions as to convictions and principles, has for six or seven years made strenuous appeals for the maintenance of self-reliance and self-respect and self-help as against the specious offerings of the General Education Board and its allies and agents. We have sedulously avoided reflection upon the motives of anyone concerned, but have pointed persistently to the certain effects. On no point have we scored a mistake. But can the eye of the *Biblical Recorder* of 1907 look in the eye of the *Biblical Recorder* of 1903 in connection with the General Education Board and the endowments of colleges and not blink?

IMMIGRATION AND THE SOUTH.

In an interview at Columbia, S. C., a couple of days before Attorney-General Bonaparte gave out his opinion of the recently-enacted changes in the national immigration laws, Dr. J. R. McMullen, "Secretary of the Southern Immigration Association," was quoted as saying:

There are many things which I wish all the people in the South could know, but we cannot tell them yet.

In a spirit of optimism which we hardly believe is justified by developments in the Legislatures of Tennessee, Texas, West Virginia, Alabama, North Carolina and South Carolina, viewed as a whole, he suggested that the policy laid down by a subcommittee of the "Southern Immigration Association" last December "has received the endorsement of the Legislature of every Southern State in which the General Assembly has met since December." Indeed, the South Carolina Assembly itself could hardly be accused of giving the deserved endorsement of the Bureau of Immigration of its own State, notwithstanding the earnest plea of Governor Heyward, fully warranted by the eminently practical and valuable results accomplished by the bureau. Again, the act of the Alabama Legislature establishing an immigration board for the State promises to be more effective in providing a salary of \$2400 a year for an immigration commissioner than for anything else. For, in addition to seeking to discourage the coming into the State of certain undesirable immigration distinctly defined, the act imposes a fine of not less than \$1000 upon any person, firm, association or corporation that shall bring or cause to be brought into the State any immigrants from any foreign country in any other way than through the State Immigration Board. That provision is not only a limitation upon the rights of individuals, which it is hardly believed the courts would sustain, but it also makes it possible for any three men, constituting at the moment the immigration board, either to restrict in their discretion immigration to the State, or to become the mediums for making the State a party to some immigration scheme that might not be to the best interests of the State. Hence, the fur-

ther suggestion attributed to Secretary McMullen that "each State will be benefited in proportion to the interest it has taken in the matter and the amount of interest it has taken in the Southern Immigration Association" must be regarded rather as a gentle hint to get into the band wagon, as it were, than as a promise based upon anything more substantial than optimism.

The outcome of the recent immigration legislation suggests that the South will do well to study carefully the movements, centering largely in New York city, but quite active at Washington and effective in the framing of immigration legislation or acts germane thereto, which have deliberately employed the earnest efforts to induce immigration to the South, reflected in the "Southern" organizations, to further their own immigration plans with the South's welfare as of minimum importance. "Conferences" at the White House as to the intent of immigration legislation can only muddle the situation. The Constitution of the United States provides the means for an interpretation of laws, and the means are the courts of the country, which should be above special consideration for this or that transatlantic steamship company's business ambitions, this or that foreign ecclesiastic or race aspiration, or this or that administrative officer's predilections. In the meantime, there need be no fear that immigration to the South will not be accelerated under the amended law. It seems quite evident, with or without an opinion from Attorney-General Bonaparte in apparent contradiction of an opinion of Secretary Straus, but only apparent, that not only Southern States, but all the States of the country, will be, after the new law goes into effect July 1 next, subject to hampering in immigration enterprises similar to that which landed a few months ago at Charleston, S. C., the Wittekind's promotive cargo of immigrants, but at the same time the way will be easy for dumping at two or three Southern ports the class of immigrants against whose herding New York city has begun to groan, a class of immigrants, in the main, of a non-productive character who naturally herd in the larger centers of population and cannot be expected to aid in the work of developing the country.

Again, the MANUFACTURERS' RECORD urges the South to depend upon itself in this matter of immigration, to have nothing at all to do with Federal Government agencies, to operate where possible only through State agencies, either official or voluntary, individual or corporate, designed to further and not to impede desirable immigration, and to avoid the possibilities of mistakes in "Southern" conferences or organizations assuming to be "clearing-houses" on the subject for the South, no matter how disinterested Southern men may be who may be induced to lend their names and to give their time and energy to the undertakings in the earnest desire to meet the immigration demands of the South.

A RAILROAD MAN ON RAILROAD NEEDS.

One of the most interesting and forcible contributions to the utterances about the railway situation has been made by Mr. W. J. Murphy, vice-president of the Queen & Crescent Route. His text relates to Southern rates, the needs of the railroads and their means for supplying them, and he prefaces his argument by quoting the recent statement by Presi-

dent W. W. Finley of the Southern Railway to the effect that the point is near where it may be absolutely necessary for the public to choose between better and safer facilities on one hand and lower rates on the other. Continuing, Mr. Murphy naturally devotes attention particularly to his own line, and considers specifically the Cincinnati Southern Railroad, saying that the road has today the same mileage as when it was first leased in 1881, and that all the capital expended on it has been for maintenance and development, none for mileage extension. The road is operated by a leasing company, which owns not even a foot of the road or roadbed, and the entire line and all the improvements that may be made revert to the city of Cincinnati. The road is dependent upon its earning power for making its improvements, and it was stated clearly in 1902 by the late Samuel Spencer, president of the line, that additional facilities and improvements must be provided, but that the work should begin immediately and be continued as rapidly as the earnings would permit. After referring to this, Mr. Murphy says that the equipment and facilities which were adequate in 1902 are now so inadequate that it is with the greatest difficulty that traffic is handled. It became imperative, therefore, that the lessee company should make improvements by building double track wherever possible, by building heavier bridges, extending sidetracks and passing tracks and also by increasing and improving terminals. He says that the company is trying to do its part to make these improvements in as short a space as possible, but if its rates are reduced it cannot push the work. This, he says, is not uttered with any selfish motive, because the city of Cincinnati, as well as the lessee of the road, will benefit by the facilities, as every permanent improvement reverts to the city.

Considering the question of what has been done with the company's earnings, Mr. Murphy notes pointedly that they have not been applied to dividends. For the first 18 years, from 1881 to 1899, the dividends paid were \$525,000, or approximately 1 per cent. per annum. After 1899 it was not until 1902 that dividends again were paid, and then at first only on \$2,000,000 of preferred stock. In 1905 the holders of common stock began to receive new dividends at the rate of 5 per cent. a year. Thus for the first 18 years these stockholders received 1 per cent. a year and for the next six years nothing. As the money did not go for dividends, Mr. Murphy shows that it went for betterments, such as the arching of tunnels with brick and stone, replacing old bridges with new ones, extending passing tracks, sidetracks and yard tracks, laying heavier rails and installing an electric block system. Moreover, he shows that the price of equipment and material has greatly advanced in the last 10 years, so that locomotives now cost \$17,000, instead of \$11,000; passenger cars \$10,000, instead of \$6500; freight cars from \$700 to \$800, according to type, as compared with \$300 to \$450. Lumber costs \$21 per 1000 feet, instead of \$12; ties cost 45 cents each, instead of 28 cents, and rails cost \$29 per ton, instead of \$20. Yet the company has increased its equipment heavily to meet business requirements, the increase in the number of locomotives being nearly 60 per cent., in passenger equipment over 37 per cent. and in freight equipment over 191 per cent. The gross earnings of the company increased over 129 per cent. in these 10 years, but expenses and

taxes in the same period increased over 141 per cent., this increase being partly caused by increased taxation, although the greatest increase is in the higher cost of labor and material. Yet, in spite of all these gains, the only items, says Mr. Murphy, in which there has been no increase in the last 10 years is the average receipts per ton per mile. Thus in 1906 they are actually less than in 1896 or in 1905 by one hundredth of 1 per cent., and, therefore, the expense ratio is increasing faster than the earning ratio of the company.

In conclusion, Mr. Murphy says that he will go further than President Finley, and say that the time has already come when it is necessary for the public to choose between better facilities and lower rates. The country is growing faster than ever before and the great and ever present need is capital to meet the increasing requirements. How, said he, can capital be obtained except through ability to pay interest, and how can interest be paid except from earnings?

Mr. Murphy has made a strong argument from the railroad standpoint, one which is worthy of serious consideration. Undoubtedly the demands upon the companies within the last year or two have been tremendous and unprecedented in magnitude, not only for improvements and increased facilities, but for higher wages. Naturally, this conflict of demands and counter-demands cannot continue indefinitely; there must be a point where harmony shall be reached in order that the business of the country may continue without friction or uncertainty. He has doubtless spoken with the hope that his words may be of material aid toward attaining the desired condition of affairs.

Bearing upon the problem so succinctly stated by Mr. Murphy was action taken last week by the Chamber of Commerce of Chattanooga, Tenn. Upon the recommendation of its trade and transportation committee the Chamber adopted the following:

Whereas, the Legislatures of several States have recently shown a disposition to add to the wholesome legislation of the National Congress State laws which are, in our judgment, unfair and unjust to the railroads, which have been such important factors in the upbuilding of our country, and especially of the Southern States; and

Whereas, such legislation on the part of the various States is the outgrowth of what we believe to be in a large measure a mistaken and misguided public sentiment; now, therefore, be it

Resolved by the Chamber of Commerce of the City of Chattanooga, That we deplore such a public sentiment and such unjust and unfair legislation aimed at the railroads, especially of the South, and that we recommend to all fair-minded citizens of our State and to the members of our present Legislature, who, we are confident, are earnestly desirous of doing only what is for the best interests of all the people, that the present unjust warfare on railroads which is being waged in other States be not encouraged or abetted in the State of Tennessee, lest such a warfare prove disastrous to the legitimate development of the industries of the State and the well-being of all her people.

Should every commercial body in the country place itself on record in this matter as the Chamber of Commerce of Chattanooga has done and, in addition, use the influence of its organization and its personal membership to demonstrate the unsoundness of the public sentiment that makes possible unfair and unjust legislation against the railroads, effective treatment of national hysteria would be given and a solution of the problem would be in sight.

The Pennsylvania Railroad used nearly 70,000 freight cars in 1906 in transporting to Eastern markets fruits and vegetables from the South.

Protected Waterway from Boston to the Gulf.

By HON. JOHN H. SMALL,
Congressman from North Carolina.

[Written for the Manufacturers' Record.]

The Congress at the session just closed authorized the construction of the projected inland waterway from Norfolk, Va., to Beaufort Inlet, S. C., and has made an initial appropriation therefor of \$550,000. The length is about 204 miles. The route as recommended by the army engineers extends southwardly from Norfolk via Elizabeth river, the route of the present Albemarle and Chesapeake canal, Albemarle sound, Croatan sound, Pamlico sound, Neuse river, and thence via Adams and Core creeks to Beaufort Inlet. The present depth authorized is 10 foot. The total sum estimated as necessary for the completion of this waterway is \$2,354,000. It is not necessary to give further details of this project in this article, and the peculiar importance of this protected route will be explained a little later.

The recognition by Congress of the Norfolk-Beaufort Inlet waterway has been received with unusual approval, and has directed anew the attention of the country to the long-cherished and discussed movement for the construction by the United States of inland waterways extending from New England along the entire Atlantic seaboard to the Gulf of Mexico. There are a number of bays and sounds along the Atlantic coast, protected from the ocean, into which flow numerous bold and navigable rivers, and the purpose has been to connect these various bodies of water, either by the construction of artificial canals or by the deepening of shallow waters, so as to afford a continuous route free from the dangers of coastwise navigation and connecting with the large area tributary thereto from the rivers which extend into the interior. The conception and advocacy of some of these connecting links dates back to the colonial period, and were live issues before the country until about 1835, when the era of railroad construction began. During this period, with the limited power of the General Government as then administered, the Congress had not undertaken to improve our waterways, and this work was fostered and maintained by the several States. Our forefathers realized the necessity for means of transportation, and thus conceived ambitious plans for waterways in the prosecution of what they were pleased to term their policy of internal improvements. During this period a number of small canals were built, which at once justified their construction by inviting what at that time was a large movement of traffic in the small-draft vessels then in use.

Not only did the era of railroad construction attract capital and stop canal building, but the owners and managers of railroads early regarded all waterways as their enemies and competitors, and by various methods diverted traffic from them and discouraged either their maintenance or improvement. All this has been recently changed. The railroad managers of ability now realize that interior waterways occupy relatively a different sphere in the transportation field, contributing a large share to the general prosperity and increasing the traffic of railroads in those commodities most profitable to carry. This wiser policy has been impressed upon the minds of the most narrow railroad officials during this decade of prosperity which we are enjoying and which has so increased our domestic trade as to produce a congestion of railroad traffic everywhere. The shippers have realized that the only satisfactory remedy is the return to the policy of our forefathers and to

enter anew upon the development of our natural waterways and to construct artificial canals wherever the conditions of trade justify the expenditure, and this work must be undertaken, not by the States or localities, but by Congress, because the National Government exercises the fullest powers in all matters affecting interstate commerce. However, wherever localities, either in their public capacity or through corporations, desire to construct canals or to make local improvements, a liberal and co-operative policy should be pursued by the General Government.

This scheme of a protected waterway from Boston along the seaboard and across the peninsula of Florida to the Gulf of Mexico is most attractive. Compared with the aggregate of the bulky products exchanged between the North and the South, and which should naturally seek movement by water, a comparatively insignificant part thereof actually goes coastwise. There are substantial reasons for this condition. Because of the hazards to coastwise navigation along the New England coast and at other points, but particularly because of the dangerous passage around Cape Hatteras and Diamond Shoals, on the North Carolina coast, only large steamships and large sail vessels can engage in this trade between the Northern and Southern ports. This of itself greatly restricts traffic, because under ordinary conditions the aggregate of water-borne commerce is made up most largely from the greater number of small vessels rather than from the few larger ships. Again, the necessity for large steamships requires considerable capital, which deters individuals and small corporations from participating and tends to create a monopoly, as is evidenced by the fact that most, if not all, of the steamship lines engaged in the coastwise trade are either controlled or owned by the trunk lines of railroads operating or participating in the traffic between the North and the South, and thus the elements of independence and competition are removed. If the chain of inland waterways were constructed this condition just described could not exist, because a perfectly safe route for small freight steamers and barges would be provided, making it impossible to effect injurious combinations, and a great volume of traffic would be carried, thus relieving the present congestion of traffic and contributing greatly to the development and prosperity of the country. With these waterways the cities and towns situated far inland and located upon navigable streams could at the lowest rates ship their products with safety and without breaking bulk to any of the larger cities North and South. At the same time it must be remembered that every one of these interior towns so situated would enjoy at once water competitive rates upon the railroads, affecting in the aggregate an immense tonnage of products and effecting a large saving in the cost of movement. Lines of railroads would be constructed to these favored towns and cities seeking to obtain a share in the benefits thus enjoyed. It may not be amiss to refer to the large number of pleasure craft which would go from one section to another, and thereby promote mutual acquaintance and mutual confidence between the several sections.

I have not adverted to the importance of these waterways as a strategic means of defense in time of war. It would render our coast line almost impregnable to assault and be of more value in the protection of our cities than all our fortifications

and our battleships combined. Torpedo-boats and torpedo-boat destroyers could safely move to the point of attack and make their deadly assault on the ships of the enemy. The mysterious and deadly submarine boat could likewise go to the rescue of the blockaded port and stealthily destroy the attacking battleships. All the engineers who have investigated any one of these waterways have with entire unanimity emphasized this valuable feature.

It here appears pertinent to refer to the more important of these inland waterways which will connect the various protected sounds and bays and form a continuous chain of navigable waters extending from New England southward along the Atlantic seaboard and to the Gulf. The first, in natural order, is the proposed canal across the Isthmus of Cape Cod, connecting Barnstable's bay with Buzzard's bay. In 1870 there was presented to Congress a report upon this canal prepared by General Foster, Corps of Engineers, United States Army, and printed as a Senate document, which discussed the practicability of this scheme and contained much interesting history. It appears that the Plymouth colonists in 1676 examined the route across the Isthmus of Cape Cod with a view to cutting a canal, and in 1736 this isthmus was described as "the place through which there has been a canal talked of this 40 years, which would be a vast advantage to all the country by saving the long and dangerous passage around the Cape." It appears that from time to time the importance of this canal was brought to public attention by individual citizens or by the General Court of Massachusetts, and in 1824 Congress for the first time authorized a survey. More than once the State of Massachusetts has authorized corporations to construct this canal, but it was never undertaken. The distance across the isthmus is about eight miles, and the work, it is said, offers no insuperable engineering difficulties. This canal would not only avoid the dangers of navigation along Cape Cod, where so many disasters annually occur, but would effect a saving in distance between New York and Boston of about 100 miles. Recently the State has authorized another company to construct this canal, which is said to have the strong financial support of August Belmont & Co., and the latest information is to the effect that they intend to construct this waterway within a limit of three years, and at a cost approximating \$10,000,000. The commercial interests of Boston are evincing enthusiasm over the prospect of realizing the long-cherished anticipation of their forefathers, and great benefit will necessarily accrue, not only to the commerce of Boston and New England, but to New York and other Southern ports. The opening of this canal will give a perfectly safe route from Boston to New York city via Long Island Sound.

The next link in the chain is the waterway connecting Raritan river with Delaware river. A canal connecting these two rivers was constructed in the early history of the country, and for quite a period was a busy highway of traffic. Some years ago the Pennsylvania Railroad acquired a controlling interest in this canal, and it cannot be said that this company encouraged its use, but in many ways its officials diverted traffic from it. This great railroad company acquired this canal in the days when it was a policy of the railroads to antagonize and destroy waterways because they were regarded as their competitors. As before stated, a wiser policy prevails now, and it is understood that this company would be glad to sell its stock at a reasonable price either to the United States or to individuals. It is anticipated that, in pursuance of a progressive policy, Con-

gress will at an early date authorize the purchase of this canal at a fair price and will enlarge the same to meet the demands of modern coastwise shipping. From New York bay to Raritan bay and river navigation is perfectly safe, and an adequate waterway connecting the Raritan and Delaware rivers would give an entrance into that busy stream of traffic, the Delaware.

Surely it is not necessary to dwell upon the next link in this line of waterways, that connecting the Delaware river and the Chesapeake bay. If anyone doubts the commercial necessity or the duty of Congress to provide this particular waterway he has only to confer with the citizens of Philadelphia or Wilmington or Baltimore, who will supply him with substantial and weighty reasons why a capacious ship canal should connect these two busy thoroughfares of trade. Necessary information is not lacking in regard to this canal. Several surveys have been authorized by Congress and reports have been made recommending the route and estimating the cost thereof. The entire length of this canal via the route of the present canal, which has been approved as the most feasible route, is about 13½ miles. Early in 1906 Congress authorized the President to appoint a commission to consider the desirability of this waterway and to select a route and estimate the cost. An able commission was appointed, consisting of General Felix Agnus of Baltimore, Major C. A. F. Flagler, Corps of Engineers, United States Army, and Lieutenant Frank Chambers, United States Navy. They have made their report, recommending a depth of 30 feet and estimating the cost of construction. It is thought by some that too great a depth was prescribed by the commission, and that the cost may deter Congress from giving its approval; but these gentlemen have acted wisely, in that they have planned not for temporary advantage, but for the future. But the main thing is to commit the country to a free canal, even at a lesser depth, and thereby to demonstrate its potential effect upon commerce.

With the entrance into Chesapeake bay a most inviting opportunity for coastwise traffic is afforded. From the Queen City of Baltimore on the north to the hustling and bounding city of Norfolk on the south and the progressive city of Richmond at the head of navigation on the James, not to mention Newport News with its immense shipbuilding plant and other cities and towns tributary to the bay, a traffic of immense tonnage and of fabulous value marks the total of its trade. And it is true, in spite of the limited capacity of the Delaware and Chesapeake Canal and the Delaware and Raritan Canal, that a very large trade is carried on by water between the cities of the Chesapeake and Philadelphia, New York and intermediate cities, only a portion of which seeks the two canals mentioned, the larger part seeking the outside route. Immense quantities of lumber are shipped and thousands of tons of coal are loaded from Lamberts Point and distributed through New England and the Middle States.

But the coastwise trade from the Chesapeake and the more northern cities with the ports of the South is greatly restricted. There are a few lines of steamships which sail from Boston, New York, Philadelphia and Baltimore to Wilmington, Charleston, Savannah and Jacksonville. It is a significant fact that the companies operating these steamships are either owned or controlled by the trunk lines of railroads with which they are supposed to compete, or by the Morse combination, which accomplishes the same results. This statement implies only one conclusion.

Why this restricted coastwise trade be-

tween the Northern and Southern ports and the Gulf? There is an immense quantity of bulky products exchanged between the two sections which would naturally seek transit by water, and why is it not so transported? Why is this movement confined to large steamships and a few large sail vessels, and why do not the small freight steamers, and particularly, why do not barges engage in this trade? It is because Cape Hatteras, projecting out into the ocean, and the dreaded Diamond Shoals, with their treacherous sands, combined with the elements of storm and wind and tide, like a forbidding sentinel, arrest this movement of trade. So long as this treacherous barrier exists, so long will our coastwise trade with the South be so restricted. Any plan which shall offer a protected route, avoiding the dangers of Cape Hatteras and Cape Lookout, must necessarily be a boon to commerce. The projected inland waterway from Norfolk to Beaufort inlet on the North Carolina coast solves this problem. A brief description of this waterway was given in the beginning of this article. Beaufort inlet is just south of Cape Lookout, and coastwise navigation from that point as far south as Jacksonville is comparatively without hazard. If the chain of waterways should be extended no further, the construction of this particular waterway will prove so great an inducement to coastwise trade as to give it an immediate impetus and to promote its normal increase from year to year. It is true that the depth of 10 feet authorized is insufficient for the most satisfactory results, but even this depth will so demonstrate the value of this waterway that there will be no trouble in obtaining the authority of Congress in the future, not only to increase it to 12 feet, but to such greater depth as the conditions may require. With this waterway there is no reason why barges may not navigate from Jacksonville to Norfolk, Baltimore and New York as freely as they are now towed from Norfolk to points north. It has been demonstrated, both in our own country and in Germany, that a barge with a draft of 10 feet can be so constructed as to have a capacity of 1000 tons, and, with this capacity, to afford the minimum cheapness of movement of bulky products. These products can be moved by barge at a cost with which the railroads cannot possibly compete, and at the same time they will relieve the railroads of their least profitable class of traffic. If cheap movement promotes commerce, and commerce creates prosperity, then we should all advocate the construction of the Norfolk-Beaufort Inlet waterway.

Eastern North Carolina and Norfolk and other cities of the Chesapeake bay have a large local interest in this particular project. Norfolk is bound by commercial ties to Eastern North Carolina. There are at least seven large navigable rivers in Eastern North Carolina, and two large sounds, the Albemarle and Pamlico, which, with the large area tributary to these waters, are land-locked from the ocean, and the only outlet for their waterborne traffic is northward toward the Chesapeake bay through two private canals. There is no similar area in the United States so effectually restricted, and this section is vitally interested in the construction of this waterway.

While navigation on the coast south of Beaufort inlet is comparatively safe, as stated, yet there are influential reasons why this chain of protected waterways should be extended further south.

The next important link is the construction of a waterway from Beaufort inlet to the northeast branch of the Cape Fear river above Wilmington. Most of this route would intersect navigable sounds and waters, and could be con-

structed with comparatively little expense, as has been demonstrated by surveys of the engineers. Thus, Wilmington, the commercial metropolis of North Carolina, would be connected and would receive its share of the accruing benefit.

From the Cape Fear river a most natural extension would be to Winyah bay, below Georgetown, S. C. This link would not be expensive, and would open up a most fertile section capable of immense development. From Winyah bay there is a natural continuous inside passage as far south as Jacksonville, Fla. All this has been surveyed, and Congress has made and is making from time to time appropriations for deepening the same.

This article would be inadequate without reference to a canal across the peninsula of Florida. This route has also been surveyed, and a most interesting report was made to Congress by the chief of engineers in 1880, under an authorization for a complete examination of the peninsula with a view to the construction of a ship canal from the St. Mary's river to the Gulf of Mexico. The route was selected, of a length of 169 statute miles, and its construction was declared to be entirely feasible. This canal would avoid the dangers of the passage through the Straits of Florida, and would shorten the route between the ports of the Gulf of Mexico and those of the Atlantic coast. Thus would a safe passage be afforded to the city of New Orleans and the other cities on the great Mississippi.

Let us for a moment indulge in a brief peep into the future. When the Empire State of New York, through the munificent expenditure of more than \$100,000,000 provided by that State, shall complete the relocation and enlargement of the Erie Canal to a minimum depth of 12 feet, a navigable waterway will have been provided connecting the Hudson river with the Great Lakes. If Chicago, the commercial metropolis of the Great Lakes and the great Mississippi valley, shall realize her plans, as she usually does, and St. Louis shall continue her demand for a waterway of 14 feet to the Gulf, then Chicago and St. Louis and other cities will be connected by a navigable waterway with the Mississippi and the Gulf. When this chain of waterways shall be completed along the Atlantic seaboard and shall unite with the Gulf and the Mississippi, and all these shall intersect the Great Lakes, then not only will the dream of the fathers be realized, but the genius of the present century, with its skill and wealth, will have enlarged even the dreams of the past, and a free and continuous highway shall encircle our coast and pierce the heart of the great Mississippi valley. With this realization will come another result of primary importance. One of the pressing problems is the control and regulation, within proper limits, of the railroads of the country. Almost each State is provided with a commission clothed with plenary powers. Congress has created an Interstate Commerce Commission, and from time to time enlarged its powers. Still the problem is not solved. With this scheme of waterways, railroad rates will be equalized, discriminations will be made difficult if not impossible, and there will be substituted for arbitrary laws a natural law of commerce, which will control rates and effectuate justice by reason of its own natural and inherent powers.

Transportation in the South.

Editor *Manufacturers' Record*:

The present outlook with reference to transportation in the South appears as if the railroads would be unable to meet the demands for some time to come and some other means of transportation would be

needed to relieve the situation. It has only been a few years ago that a prominent railroad official said in a speech "that there was not business enough in the whole country, if distributed among all the railroads, to make them pay even a moderate return upon which they could live." The increase in business for the railroads shows a remarkable development in all lines of business in the last few years never experienced before in the history of our country. In the early thirties, when railroad building commenced, the majority of the people were loath to give up the slow and tedious water transportation, and it was years before the railroads proved their superiority over the water transportation of that time. Even stage coaches then competed successfully with railroads that are some of the most important of the present time. As the building and improvements of railroads increased the traffic left the Southern seaport towns and rivers, and the towns at the heads of river navigation, along with the seaport towns, lost their precedence, a number of these towns decreased in population, and most of the railroads to these towns had hardly enough business to maintain them.

The traffic of the South then going to trunk lines parallel to the coast and capital being almost entirely given to building up the parallel coast lines, for years railroad stocks and bonds seemed to be the investment of the age, with the building of railroads beyond the needs of the country, necessitating numbers of roads going into the hands of receivers. Competition forcing roads to haul freights long distances for the same rates as shorter lines and operating through passenger trains on the cheapest passenger rates with the most expensive service, losing money from such operations, while money could have been made with light, inexpensive local passenger trains using high local rates and leaving the freights for the shorter lines.

We are now facing a situation where there is unparalleled prosperity and development of business following a period of depression so close that the railroads have not been able to meet the demands for transportation, and it appears possible that relief can be had by using water transportation in connection with the railroads. The bulk of the business of the South seems to be pushing forward mostly on these parallel lines to the coast, and if this traffic could be turned to coastwise steamships and delivered to the different Southern seaport towns and distributed by the railroads to adjacent territory to each seaport, the long haul would be on the cheaper rates and the shorter haul on the higher railroad rates. This would enable the roads to use their equipment more effectively, and the distribution of freight from a number of seaports would relieve the present pressure on the lines that handle the bulk of the business, avoiding a number of yards and transfer points which are causing delays and damage to freights. With the freight being handled from these various Southern seaports a great deal would be handled over roads that for miles pass over a country where the tonnage of the trains can be much more than the roads which handle most of the Southern freights now, on account of low grades and light curves. The Southern seaport towns would prosper as well as the coast sections. The time has come when some radical change should be made, and the combination of water and railroad transportation seems to promise relief. The inland waterway on the coast of North Carolina is a grand step in the right direction.

WM. MONCURE.

Raleigh, N. C.

The Retail Hardware Association of the Carolinas will meet at Charlotte, N. C., July 9-11.

LEGISLATION AGAINST RAILROADS.

By L. C. LANE.

[Written for the Manufacturers' Record.]

It has always been a common instinct of man to grasp imaginary or real present pleasures or gains at the expense of future prosperity. In our eagerness to attain present gain, at the possible sacrifice of future prosperity, we are, in many of our Southern States, agitating the enactment of legislation which should at least be given most careful and conservative consideration.

In viewing, with bright hopes for the future, the past year, we look back upon the record year of commercial progress in the South. We should ever bear in mind that prosperity is not a fixture, but an existing, destructible condition; that it can be swept aside more easily than it can be rebuilt.

In looking back over our year of prosperity it behooves us, after ascertaining the prime factors in the building up of this vast commercial progress, to see how these factors can be best employed to contribute to still greater prosperity.

The MANUFACTURERS' RECORD, in referring to the progress of the South during the last six years, says: "In six years, with an increase in the population of about 2,400,000, or something more than 10 per cent., the South has increased the value of its farm products by \$728,000,000, or 57 per cent., and the value of its manufactures \$761,000,000, or 52 per cent. It has added 3,493,000 spindles to its cotton-mill outfit, an increase of 55 per cent., and its mills used in 1906 about 2,375,000 bales of American cotton, or 48 per cent. more than in 1900. In the six years the South's annual pig-iron production has increased by 896,000 tons, or 34 per cent.; its coal production by 34,202,000 tons, or 69 per cent.; the value of exports at its ports \$177,000,000, or 38 per cent., though it furnishes more merchandise for export than it handles through its own ports, and in that time its railroad mileage has increased by 11,441, or nearly 22 per cent., and the assessed value of its property by \$2,490,000,000, or nearly 48 per cent."

It is evident that this great degree of prosperity has been attained through the energies of the people themselves, yet it is equally evident that it could never have existed and cannot continue to increase without the development of transportation facilities. Our coal, iron, manufactured products, farm products, all must be marketed, and the urgent demand for more and better railroad service during the past year demonstrates the fact that railroad development is absolutely essential to increased commercial progress. Our prosperity of the past year has been unequaled in the history of man, yet we have reason to look forward to a year of still greater progress. Such men as John W. Gates portray the possibilities of the South in coal and iron in figures which are at first glance astounding, but which, after careful consideration, will seem not in the least optimistic. Our cement industry is growing, as is every other industry we have undertaken.

Will it be well for us, in the face of this great commercial prosperity, to place obstacles in the way of the greatest necessary factor, the railroad? The experience of the last year has demonstrated the fact that under the present scale of rates we have been able to develop our industries as never before. It is true during the last year there has been a great shortage of rolling stock on our Southern lines, and our delivery of manufactured products has been thereby delayed. Can we improve this condition by imposing fines on the

railroad for not furnishing cars which they not only do not possess, but which they have been unable in many instances to obtain? We would be better able to improve this condition by the development of the great car and locomotive industry in the South, where is found every product needed in this industry.

While there is doubtless need of legislation along certain lines, it is unreasonable to suppose that a universal reduction of the existing freight and passenger rates and the imposition of unjust fines will tend to induce new investors to enter the field of promotion of railroad enterprises, and that these reductions and impositions will act as an incentive to the lines in operation to increase their present holdings. Admitting that the railroads are making large profits, yet they are using these profits to good purpose, for during the last six years the railroad mileage of the South has increased over 11,000, and over 3000 of that amount during the last year. In addition to increasing their mileage, the roads in operation are improving the present lines and are buying cars and locomotives to be put into commission as fast as they can be procured.

Not only does this legislation affect the steam lines of the country, but the electric lines, which have always been a power in the upbuilding of our cities, will be restricted as well. The writer, in talking a short time ago to the president of one of the largest street-railway systems in the South, asked him what in his opinion would be the probable effect of proposed railroad legislation in his State. He said that, in his opinion, it would serve to retard nearly every line of commercial progress; that his line heretofore had spent thousands in upbuilding, extending and improving their system; that their line had been one of the prime factors in the rapid growth of their city, but that if proposed laws relative to steam and electric lines were enacted they were unable to see their way clear to spend any more money along this line, nor would they advise others to do so. I think this is representative of the railroads at large.

Our laborers are paid better wages today than they have ever been paid before, and materials are much higher than they were eight or ten years ago. The result is that the extension of lines and the procuring of rolling stock is a greater expense today than it was several years since.

Mr. Finley, president of the Southern Railroad, in his letter of January 16 "To the Public Served by the Southern Railway Co.," expresses graphically the increase in expense of construction and operation of the railroad today. He says: "The large increase in expenses may be illustrated as follows: Since 1898 bridge timber has in-

creased from \$9.36 to \$20.52 per 1000 feet; cross-ties from 28 cents to 34.5 cents per tie; steel rails from \$17.75 to \$28 per ton. Since 1898 prices of equipment have increased as follows: Locomotives from \$11,392 to from \$16,000 to \$20,000; passenger coaches from \$6315 to \$9468; freight cars from \$500.43 to \$765; coal cars from \$368 to \$1135. The cost of labor has increased per mile of road from \$1621.67 in 1895 to \$2874.71 in 1906, and from \$2513.64 in 1905 to \$2874.71 in 1906. Taxes of the company per mile of road have since 1895 increased 63.41 per cent."

We cannot say that the railroad has failed to appropriate a fair share of her earnings to the development of new lines and improvement of the old, for during the last 12 years the Southern alone has spent or contracted to spend over \$96,000,000. This is only representative of what the railroads of the South are striving to do, namely, earn good dividends for their stockholders and offer better facilities to the public. Therefore, in view of the present prosperity and the urgent need of and great demand for more and better railroad facilities, will it be to our advantage to enact legislation which may put a damper on this line of development?

It is true that some legislation of this kind has been passed, for instance, in the State of Ohio. The conditions there, however, are entirely different. It is a noticeable fact that such legislation was not passed 25 years ago, but after the State had been interwoven with steam and electric lines, until new steam railroad propositions were almost a thing of the past. Ohio secured adequate transportation facilities, then reduced its rates. Its line had been brought to the point where the demand for vast expenditures for extension and improvement did not compare with the present demand in the South. They had practically completed their systems, and could well afford to operate under the new rate law.

This is not a plea in behalf of the railroad, but simply the expression of a desire that we, for our own good, consider most carefully, before we take steps which may tend to retard our rapid march of progress. It would be well for us to weigh carefully the words of Mr. Robert B. Armstrong, president of the Casualty Company of America, in an address before the Iowa State Bankers' Association. He said: "One of these mornings you will miss prosperity at breakfast. There will be many excuses for her absence from her usual place. One will say 'bad crops,' another will say 'overproduction,' another will say 'abnormal extensions of credits,' but none of these will be the real reason, though they may be contributory. The real reason will be an epidemic of fear, of timidity, of distrust, produced by unwarranted continuous attacks upon every instrument of progress and development which has made and is making this country."

Demopolis, Ala.

CAUSES OF RAILROAD WRECKS.

By G. S. BRANTINGHAM.

[Written for the Manufacturers' Record.]

In 1767 the Colebrook Iron Co. made a rail of cast iron to take the place of the timber with an upright flange on the inner side. This made the first real "trammel road," the flanged track acting as a trammel to gauge the road and keep the wheels on the track. This method of track construction, while being a great improvement over former patterns, still had a serious drawback. Dirt and mud settled on the track and rendered the flange useless, causing derailments. In 1789 Jessop remedied this defect by making a flat rail and

flanged wheels, setting the rails 4 feet 8½ inches apart, the present standard (1907). "Birkenshaw" in 1820 made further improvements with his fish-belly rail, it being reinforced by stiffening ledge on the under side and rolled in continuous lengths, each weighing 83 pounds. This rail was laid in cast-iron chairs fastened to square stone blocks laid at regular intervals. The edged rail and flanged wheel constitute the basis of the whole system of railway building and road laying. It must be remembered at this time that the only

means of shipping merchandise was by way of canal, the length of same being 50 miles. It took 36 hours to cover the distance; the cost \$4.37 per ton.

In 1821 England authorized the construction of the Stockton & Darlington Railway. The act provided that the road should be operated by "men, horses or otherwise." The "otherwise" was an important consideration, for about this time Stephenson was completing his first successful engine, the "Experiment," which in 1825 opened the road, drawing its trains of 34 industrial cars at the rate of 10 miles per hour, a signal man preceding the entire caravan to warn the people from the road. It was not for some time that passengers were carried, the roads having been built solely with a view to securing the manufacturers and shippers. This first road marked a great era of railway building, the costly experiments, and it was many years before a rail was made that would answer the needs of ever-increasing traffic and ever-increasing weight and speed in rolling stock. Stephenson's "Rocket" was not built until 1829, when it was accepted by the Liverpool & Manchester Railway on account of its "lightness, power and speed."

From 1829 to 1907 how many hundreds of years of railroad improvements have been crowded into this short time, and how familiar we all are with the cardinal points of improvement as typified by the modernizing of the passenger train of today, the stateroom car, the observation car, where the traveling public can enjoy the barber shop, bath, weekly and monthly periodicals, stenographer, and the car where the traveler can dine in quiet and luxurious comfort.

The origin of the railroad and tramway was the crude trammelway built for freight or general merchandise. The trammelway has developed in two distinct directions—as a railroad for carrying passengers and freight over great and even greater distances, and the road or railway which is still used in the mine and in the colliery. And while the improvements in the building of railroads and equipment has almost daily been changed and improved in the way of electric signals, towers, automatic switches, heavier rail adopted by the American Society Civil Engineers, steel freight cars, both gondolas and box, with a carrying capacity of 100,000 pounds, larger ties, tieplates, rail braces, angle bars, making a continuous rail, larger and heavier locomotives to handle the increased tonnage of trains which necessitated new bridges, in the whole entire new construction of roadbed, but nothing has been done to improve the old rigid frog, guard rail and wheel flange; these two dangerous elements are still the same, and with close investigation it will be found that a large percentage of wrecks and derailments can be attributed to the pounding of the flanges on guard rails and frogs, where cracked and broken flanges are caused, and at the first curve the broken part comes in contact with the rail and the wheel "rides" off it, causing wreck and loss of life. What is needed to complete and make perfect the enormous strides in railroad improvements in the last 25 years is the elimination of the rigid frog and guard rail from the main line, giving a continuous rail under fast and heavy traffic and increasing the metal in wheel flanges. With such improvements on any trunk line with heavy traffic wrecks will be a thing of the past as far as caused by track conditions.

A board of trade has been organized at Calvert, Texas, with Dr. Daniel Parker president, Mr. H. M. Ryman vice-president, Mr. S. M. Gibson treasurer and Mr. P. T. Norton secretary.

TO STRIVE FOR INDUSTRIES.

Plans of the Bluefield-Graham Chamber of Commerce.

[Special Cor. Manufacturers' Record.]

Graham, Va., March 16.

About four months ago two or three men of Bluefield, W. Va., and Graham, Va.—twin cities here on the crest of the Alleghenies—began hammering away, day after day, through the local press for a new Chamber of Commerce. The old Chamber, with only a few members, has gone out of existence, and has been succeeded by the Bluefield-Graham Chamber of Commerce, with 150 members and the following officers: President, J. W. Ruff; secretary, Geo. H. Hill, and J. T. Thornton, treasurer; vice-president, S. N. Huford of Graham. A board of 25 directors was elected, 20 from Bluefield and five from Graham.

The first business the new Chamber will take up is the location of a Portland-cement plant in Graham. The limestone, shales and clays are all assembled here on the Bluestone river and within five miles of the great Pocahontas-Flat Top coal fields. State Geologist I. C. White of West Virginia says: "This limestone bed, with all suitable shales and clays with it, runs for many miles along Bluestone river, and is 1200 feet in thickness. Situated so near the coal and coke supply, it is one of the greatest of resources."

The geographical and economic position of the Bluefield-Graham district is peculiarly fortunate. It is the entrance to and the metropolis of a region which is the seat of great industrial activity. On the north, northeast and northwest lie the coal fields, penetrated by the Norfolk & Western in the center, and entered by the Tidewater in the northeast and the South & Western in the northwest sides. The latter mark a new era in modern railroad construction for low grades and slight curvatures. The sole object in building these great roads is to enter the coal territory which is tributary to the Bluefield-Graham district and dependent upon it as distributing and financial center. Next year the Norfolk & Western will have completed its Dry Fork line and another and still larger field in the same coal measures—the Pocahontas—will have its outlet through the Bluefield-Graham district. On this line the Berwind-White Company of Pennsylvania, the largest bituminous coal operators in the world, have installed a very large plant, and about 20 other operations have gone in. The growth of Bluefield and Graham heretofore has resulted solely from the mining development on the Norfolk & Western's Elkhorn line through the Pocahontas-Flat Top coal field. This growth has gone from about 1500 population in 1892 to about 20,000 in 1906.

South and southwest of Bluefield and Graham and within wagon-haul distance are the rich agricultural and cattle counties of Southwest Virginia. A few miles to the east is the rich, high-grade Potts Creek iron-ore field, which the Norfolk & Western is preparing to open. This ore will be brought to Graham, where the Virginia Coal & Iron Co. is making ready to blow in its furnace and where a steel mill is to be built.

Adding still further to the importance of the Bluefield-Graham district are the enormous lumbering interests. More than 100,000,000 feet of lumber is cut annually within the limits of its trade territory. Much of it should be manufactured here and go out in a finished state.

The efforts of the new Chamber will, of course, be employed in promoting the establishment of industrial enterprises in the district; but only worthy and substantial concerns will be assisted. To

such free sites will be given and local capital supplied. Penurious, lame and broken-down promoters will be given no encouragement.

The Chamber will do some advertising in a sane, conservative manner, but will not enter into a frantic, profitless scramble with other Southern cities for enterprises.

Any inquiry addressed to Mr. Geo. H. Hill, secretary, Bluefield, W. Va., will receive an immediate reply.

W. D. ROBERTS.

TO SPEND \$320,000.

Public Improvements Planned for Lawton.

[Special Cor. Manufacturers' Record.]

Lawton, O. T., March 15.

When the voters of the young city of Lawton, on March 12, cast a majority of their ballots for the issuance of \$260,000 of municipal bonds they took the necessary preliminary step toward the building of one of the leading commercial centers of the new State. Bidders for the bonds were filing their offers long before the day of election, and the entire issue will probably be sold in 30 days.

Extending the city's water system so as to include famous claims No. 1 and No. 2, drawing in the great opening of 1901, which are now the Woods and Beal additions to the city and contain a population of 2500, so as to make a reservoir in the Wichita mountains, 12 miles distant, a source of water supply, will require \$200,000. A dam site has been selected in the mountains by the United States Geological Survey, and is the basis for forming a reservoir with a drainage area of 110 square miles, and contemplates a daily supply of 10,000,000 gallons. No pumping station will be required, as the altitude of the dam is sufficiently above the elevation of the city to insure a gravity flow through an 18-inch pipe.

This dam site has also been recommended to the War Department, and there is strong probability that Secretary Taft may use it in preparing for the construction of a brigade post on the Fort Sill reservation. The site is just outside the west line of the reservation and about 10 miles from the present post. The site selected for the new post, however, is on a direct line between Lawton and the dam site, and thus conditions are favorable to a joint use of the water from the reservoir by Lawton and Fort Sill. Secretary Taft will send Brigadier-General Bell here in June to investigate the water supply. In the meantime, Engineer Gordon of the Geological Survey, who is in charge of the great Government irrigation project at Garden City, Kan., has been ordered here by the Interior Department to make investigations, surveys and estimates, and his figures will be ready for presentation to General Bell upon his arrival. Secretary Taft has \$225,000 with which to begin the enlargement of the post. This is attracting railroads, people and industries to this city, and will result in an increase in its population that nothing else would induce.

The Government sold the townsite of Lawton five and a half years ago in lots to the highest bidders at auction, and it brought about \$480,000. This money was held in trust by the Interior Department, and every dollar of it is being expended in public improvements in Comanche county. Lawton has a temporary water system that cost \$80,000, a storm sewer system that cost \$50,000, a sanitary sewer system that cost \$60,000, a county courthouse and jail that cost \$50,000, a schoolhouse that cost \$20,000—all built out of the lot-sale fund and under the immediate direction of the department through the Geological Survey.

Gerald H. Mathis, a nephew of Secretary Hitchcock and a graduate engineer in the survey, drew the plans and specifications for these improvements and personally supervised the construction of most of them. He was unable to locate and appropriate a permanent water supply with the limited funds appropriated for water-works, and he installed only a temporary pumping station at wells near the city. The supply has nearly been exhausted, and this accounts for the necessity of the city having to vote bonds in order to get a permanent water supply.

The engineer had no more money than he expended in installing the storm-sewer system, and he got it only about half complete. Hence it was necessary that the city resort to the bond issue to obtain funds to complete the system preparatory to paving its streets. In order that the streets may be graded in preparation for the paving, the issue carries an item of \$10,000 for this purpose. There is in the hands of the Interior Department an amount of \$60,000 which was appropriated by Congress last year for the extension of the city's water system, and this is now available. Thus it will be observed that within the next few months Lawton will begin the expenditure of \$320,000 in public improvements.

A five-story hotel, the most modern in the new country, is being completed at a cost of \$80,000 by the Lawton Hotel Co. The city has a public municipal building that cost \$25,000. A three-story bank building, costing about \$50,000, is being constructed by Mrs. S. L. Keegan. W. H. Quinette has awarded the contract for a business block to be constructed this year at a cost of about \$40,000. The Benbow-Horton Hardware Co. has accepted the architect's plans for the construction of a four-story brick building to cost about \$60,000. A. Lowinger has advertised for a contract for the construction of a brick business house to cost about \$20,000. C. S. Powell, a druggist, is having a cement-block building erected at a cost of \$10,000. J. J. Folk has awarded the construction of a \$20,000 brick business house. J. R. Gillam and C. C. Hammonds are preparing to build a modern business block at a cost of about \$20,000. The city Board of Education will apply this year for a donation with which to build a public-library building. The Independent Cotton Oil Co. this year constructed a plant at a cost of about \$80,000. Crawford & Co. are putting up a mill and elevator at a cost of \$35,000. The city has expended nearly \$100,000 in the construction of cement walks during the past 12 months. The Lawton Ice Co. has recently installed a creamery and a broom factory at a cost of about \$15,000. Charles W. Payne has plans completed for the erection of a \$25,000 residence, and Mrs. S. L. Keegan has awarded the contract for an \$8000 residence.

The Lawton Natural Gas Co. recently reached the city with its pipe line from four gas wells four miles east, and several industrial plants are now being operated by natural-gas power. The company has contracted for mains throughout the city and will supply gas for all purposes. Dr. T. W. Brewer is interested in a company that proposes to establish a health resort and sanitarium at a sulphur artesian well two and a half miles northeast.

W. F. KERR.

Mr. C. A. Wood of Charlotte, N. C., is reported to be promoting the establishment of a passenger line of automobiles to operate between Washington, D. C., via Charlotte, N. C.; Spartanburg and Greenville, S. C., and Atlanta, Ga., to Macon, Ga. The proposition has not, it is said, progressed beyond the preliminary stage.

TYPICAL WEST VIRGINIA COAL MINING.

[Special Correspondence Manufacturers' Record.]

Macdonald, W. Va., March 18.

Although the operations of the coal properties owned by the Dixon interests are known in a general way to be of great importance and magnitude, the development of these properties has been so entirely without appeal or announcement to the public that even in West Virginia there is lack of complete knowledge as to the scope of their enterprise, while to the outside world only the most vague information has come, and almost complete ignorance regarding the properties and the plans for their development.

It will be news to most everybody to hear that the New River Company, which is the holding company for the various mining, coking and railroad interests owned by Mr. Samuel Dixon and his associates, represents about 40 per cent. of the producing capacity of the New River coal field, and, including the holdings in the Kanawha field, it represents about one-fifth of the entire coal shipments over the Chesapeake & Ohio Railroad.

The operating company is shipping from 29 mines, and is the second largest coal producer in West Virginia, being exceeded by the Fairmont Coal Co. alone. Thirty thousand acres of lands are owned in fee and nearly 30,000 are under lease, these holdings comprising the cream of the New River field. Investments and assets of the company represent a total value of fully \$15,000,000.

At present mining operations are being conducted on the leased lands only, the lands in fee being reserved for future development. Only the Sewell seam is being worked. It runs from four to five and one-half feet in thickness, and of this seam the company estimates there are fully 600,000,000 tons. Under this seam the Fire Creek coal is found practically throughout the entire holdings of the company in the New River field.

In addition to perfected methods of mining, the company has also provided unusual facilities for shipping and marketing the coal. A railroad line 53 miles in length, now in partial completion and in operation, carrying freight, passengers and mails over the completed parts, will reach from the operations in the New River field to terminals at Mt. Carbon, at the head of navigation on the Kanawha river and connecting with both the Chesapeake & Ohio and Deepwater railroads. Here it is proposed to build tipples and provide facilities for a large river connection, so that barges may be loaded with New River coal for Cincinnati, Louisville and New Orleans markets, places which have heretofore never had a pound of New River or Pocahontas coal shipped to them by water.

It is counted that the Western market will be vastly benefited by the river facilities to be thus provided, and the whole New River field will be helped in many ways. Incidentally, since water transportation is now the quick transportation, it will be possible to get freight shipments into the New River field in a few days instead of two or three weeks now required.

There is never any trouble in marketing all of the New River coal that can be shipped; in fact, the demand is always far in excess of the amount present transportation facilities can take care of. Nevertheless, the most systematic, methodical and comprehensive plans for the marketing of the New River Company's product have been perfected. In Richmond, Va., 80 per cent. of the coal business is done by the White Oak Coal Co., the selling end of the New River Company. It was found necessary to provide bins and facilities for handling and delivering the coal, so the

company owns its own teams and carries 40 head of stock in this work.

In Indianapolis, Ind., where there has never been a single bin for any kind of coal, and no facilities exist for the handling of smokeless coal, the company will put in 5000-ton bins and create conditions favorable to the marketing of New River coal.

At Cincinnati a \$75,000 terminal is being built on Walnut Hills, and \$50,000 is being spent for a transfer station and plant at Newport, Ky., across the river from Cincinnati. This will vastly increase the ease with which New River coals may be handled in Cincinnati, and must ultimately result in a greatly-increased demand for these coals.

All tidewater coal goes through the hands of C. H. Sprague & Sons of Boston, long and favorably known to the coal trade and being among the largest shippers in Boston. They sell at Providence, where they have a wharf and bins; at Searsport, Maine, the terminal of the Bangor & Aroostook Railroad, where, with a \$200,000 plant, they can store 150,000 tons, and as they have the largest Boston trade of any shippers in Boston, facilities are provided for the local business through the Mystic Wharf. Sprague & Sons could handle all of 2,250,000 tons a year if they could get it. They call for 150,000 tons a month and get about 80,000 tons, or about half the product possible as the output of the present run. With the completion of the railroad lines of the company it will be possible to very largely increase the output of the mines, and new mines will be opened whenever improved transportation facilities will justify.

Although differing in magnitude, yet the New River Company's development is typical of what has occurred in the coal fields of West Virginia from the very beginning of the industry of coal mining here on a commercial scale. The whole story of the beginning and progress of coal mining in West Virginia may never be written, but it is of more human interest than many a romance and almost as full of picturesque detail as the story of the Argonauts of '49 in California. The California gold discovery created a new type of civilization, a class of millionaires the world has never known before. It established new standards of living and of luxury; it brought forth the modern hotel palace, and it contributed a well-nigh vital if not the decisive element of advantage to the armies of the North by providing enormous and unlooked-for additions to the gold supplies of the nation and of the world. The men who wrought these wonders were for the most part, if not exclusively, soldiers of fortune and adventurers in the better sense of the term. They had hardly other capital than stout hearts and willing hands, and they ventured everything in the mighty game. So in West Virginia the millionaire coal operators of today have mostly come up from poverty and work in the mines with their hands, and they who are at the head of great companies, who live in beautiful homes and have lifted the State from penury to present wealth and given it potentialities of enormous future affluence are men accustomed to the hardest of toil, and who have trod every step on the way from the pit to the treasury.

Among the conspicuous figures in the romance of the coal development of West Virginia Mr. Samuel Dixon, president of the New River Company, has a rightful place. An Englishman by birth, he came into the New River district 29 years ago, at the very beginning of developments here. For years he was a bank boss, and

before mastering all the details of financing large corporations and marketing the products of the mine he knew from the very ground up every part of the business of practical coal mining.

His first venture as an operator was made at Macdonald in 1893, when he bought a controlling interest in the Sugar Creek Coal & Coke Co., a small but profitable operation, which he still individually owns. Associated with him at that time were Symington Macdonald, a Scotchman, and R. F. Brewster, an Irishman, who had been a member of Parliament from Dublin and was a captain of Grenadiers in the expedition for the relief of Khartoum. The personality of these three indicates the international and cosmopolitan characters of the men who have developed these fields, and the nomenclature of the towns and streams shows the prevalence of the English, Scotch and Irish in the pioneer work. Mr. Dixon also purchased the Glen Jean & Lower Loup Creek Railroad from Col. J. W. Davis. The road was five miles long. Following this transaction 5000 acres of coal territory were opened up on the White Oak branch. The following year 4300 additional acres were taken up, and the White Oak branch was extended seven miles and the three mines of the Stuart Colliery Co. were opened up. A boundary of 1200 acres on the White Oak branch, opened by Justus Collins of Charleston, was next taken over. The New River Fuel Co. having been organized, all these properties were put into the company, giving it all the operations and coal contiguous to the railroad, making in all nine large operations, developing 11,000 acres of coal, with an approximate investment, including railroads, of \$2,300,000 in money. Then the New River Fuel Co. built a three-mile extension of railroad from Macdonald for the purpose of developing 4500 acres on the headwaters of Loup creek, known as Price Hill, and on which are two mines developed by the Price Hill Fuel Co., known as Price Hill and Sherwood. The same year the company bought the Beckley Coal & Coke Co.'s splendidly-equipped plant, with 4700 acres of territory, and also developed the property owned by the Cranberry Fuel Co., consisting of 6800 acres, and on which four large mines have been opened, the Sprague, Skelton, Cranberry and Prosperity. The company also bought the property of the Mabscott Coal & Coke Co., situated in the town of Beckley, and now an incorporated town having its own mayor and council, and known as the town of Mabscott. Other purchases were the McGuffin interests in Harvey, Prudence and Dun Loup, the flat-top lands in Raleigh county and the Kanawha lands around Mt. Carbon. In the way of coke operations the company owns three large well-equipped plants in the New River district, at Macdonald, Collins and Harvey, with a total of 320 ovens and a capacity of 450 tons a day, and in the Kanawha field at Mt. Carbon another well-equipped plant with 70 ovens and 100 tons capacity a day, all of which are in full blast and unable to fill the demand for the foundry and furnace coke produced.

The railroad proposition is under two separate organizations, the White Oak Railroad, under charter from Mt. Carbon to Beckley, and the Piney River & Paint Creek, from Prosperity to Beckley. Besides getting into the heart of the richest of the New River coal fields, these roads will occupy the great advantage of connecting with both the Chesapeake & Ohio and the Deepwater-Tidewater railroads, and striking river transportation at Mt. Carbon. It is the intention to complete this railroad construction as rapidly as possible and be in position to operate the mines to their full capacity. Orders have

been placed for 1000 50-ton coal cars and three locomotives for the White Oak Company, and negotiations are under way for 800 cars and two locomotives for the Piney River & Paint Creek road. The cars are of standard gauge and Chesapeake & Ohio specifications, and when delivered will enable the coal company to triple the output of coal from the mines along the two roads.

In the past two years over \$1,250,000 has been spent on railroads and coal development in Fayette county and \$1,500,000 in Raleigh county. Every mine has been built according to up-to-date standards, and the character of the improvements is unexcelled so far as durability and strength are concerned. The most modern machinery has been installed in every mine opened within the past two years, and in the mining end there is a complete system of management, the company employing in addition its own mining inspectors.

All this vast development has been carried out in the most quiet manner possible. There have been no prospectuses printed, and none but those on the inside have been asked to subscribe to any of the stock. The New River Company was first organized with \$9,000,000 authorized capital to take over all the holdings of the New River Fuel Co. and carry out plans originally made. An application will shortly be made to the Secretary of State of West Virginia for an increase of capitalization to \$20,000,000. The assets of the company are about equally divided in four parts. One represents the ownership in fee of 30,000 acres of lands, another the railroad property, a third the new mines and a fourth the dividend-earning mines. The operations, in which the New River Company owns from 60 to 100 per cent. in each, are the Macdonald Colliery Co., White Oak Fuel Co., Mabscott Coal & Coke Co., Stuart Colliery Co., Collins Colliery Co., Prudence Coal Co., Eureka Colliery Co., Great Kanawha Colliery Co., Harvey Coal & Coke Co., Dunn Loup Coal & Coke Co., Beckley Coal & Coke Co., Cranberry Fuel Co., Price Hill Fuel Co. There are no bonds on any of these properties. The stock is owned to the extent of 35 per cent. by West Virginia parties; one-third is owned by capitalists of Lynchburg, Va., and Scranton, Pa., and the balance in Boston.

Some interesting facts about the mining end may be noted. The total disbursements to employees of the company foot up \$200,000 to \$225,000 a month. A considerable number of the miners are foreigners, as is evidenced by the fact that all of \$10,000 a month is paid for international money orders by men working at the various mines of the company. Another fact of interest is that everybody who can do any kind of work can get employment here. One unfortunate who bears the picturesque if somewhat shocking sobriquet of "Hellfire Jack," and whose right arm and left leg are gone, earns \$1.50 a day as a watchman, and another victim of a railroad accident who is minus both legs makes \$1.10 a day in a similar position. Men who are sound and industrious make big wages, and even those who in any other part of the United States would be objects of charity can be self-supporting here.

ALBERT PHENIX.

The annual convention of the Southwestern Electrical and Gas Association will be held at San Antonio, Texas, May 14-16. The officers of the association are Messrs. H. S. Cooper, president; J. W. McLendon, J. P. Crerar and Samuel Kahn, vice-presidents; R. B. Stichter, secretary; A. E. Judge, treasurer, and M. M. Phinney, H. T. Edgar and J. F. Strickland, additional members of the executive committee.

THE AMERICAN MINING CONGRESS.

[Special Correspondence Manufacturers' Record.]

Joplin, Mo., March 16.

The American Mining Congress, which meets in Joplin, Mo., next October, is the absorbing topic toward which the attention of the entire Missouri-Kansas mining district is now centered, the petty jealousies of the various camps having been laid aside for a union of effort which promises to make the next meeting of the congress the most important ever held by that body. A number of meetings of the most prominent mining men of the district has already been held, with no camp of the whole region without representation. Plans have been formulated and are rapidly being perfected for the entertainment of the 600 or 800 guests who will assemble here in October. Committees have been appointed and divided into subcommittees for the more expeditious handling of the work, no portion of the entire district being without representation on some committee. Every factor making for the most perfect entertainment of the guests is receiving the most detailed attention. Work on the new Katherine Hotel is being pushed with all vigor, that the members of the congress may have extended to them the very best accommodations possible, while the exceptionally large number of automobiles in the city will be called into service in showing the visitors the progressive mining now being done in the Missouri-Kansas district. The country roads in the vicinity of Joplin, Webb City and Cartersville, Carthage and Galena are better than the streets of the typical mining town, making it possible within five minutes from the heart of the business center of the city of Joplin or Webb City to be at the mouth of some of the greatest zinc mines in the world, while 25 minutes will make it possible to pass twice as many mines, all active and producing jack.

The recent meeting of the Joplin Commercial Club, which gave rise to so much enthusiasm and the more complete discussion of plans for work and the duties devolving on the whole district, was addressed by Dr. E. R. Buckley, State Geologist of Missouri. He laid great stress on the obligation which he had personally taken upon himself to make the meeting at Joplin a success. A second of the three reasons given for his special interest in the success of the coming session was the exploitation of the wonderful territory in the center of which the congress is to be held, and the third his great interest in the mining industry wherever it is carried on.

"It was for the purpose of upbuilding the mining industry in general that the American Mining Congress was organized," said Dr. Buckley, "and to that end to establish a department of mines and mining as a part of the President's Cabinet. The comforts and luxuries of our modern civilization are dependent upon two great basic industries, agriculture and mining, and both should be fostered by our Government with equal care. It has been the industry of mining, the early struggles of the prospector, that has blazed the way for agriculture. Both are essential to our present civilization, yet agriculture is cared for by a department head, while mining is almost totally neglected by the Government. A department of mines and mining would be of the same great good to the mining industry as the Department of Agriculture has been for agriculture. It would work some much-needed reforms in our mining laws. It would insure a more satisfactory disposition of the public domain. It would add importance to our mining schools and serve to exploit in a substantial way the untold mineral resources of this country, and, above all,

show to the world that the mining industry is honorable as any other and is being carried on, except in a few cases, by men who are striving to upbuild this great nation."

It would seem from the amount of work now being done throughout the territory that special effort were being made to see the limit of activity and result, but it can be traced entirely to the healthy conditions existing in a great and rapidly-growing industry. Certainly no better time could have been selected for the favorable showing of the district than the coming season. Building of all kinds is in rapid progress. By the middle of April all of the brickwork on the new hotel will have been completed and the hostelry opened by the middle of July. The plant of the Southwestern Bridge Co., which is in process of construction, will be finished long before the congress convenes, and will be one of the largest and most complete west of the Mississippi river. The new wagon factory is already placing the Joplin wagon on the market, while by fall the Miners' Manufacturing & Gas Engine Co. will have a number of its engines on exhibit at the various mills of the district, where they may be seen in actual operation. The street railways are improving their service and the Rogers line is erecting new and more commodious buildings for its cars, while the Helm line is crawling toward Kansas at the rate of several rods per day. This activity, aside from the great mining industry, would more than support the present population and give room for many more, but are in little evidence compared with the showing made by the mines during the first nine weeks of the new year. During this period there were produced 50,692 tons of zinc, valued at \$2,400,058, and 7045 tons of lead, valued at \$606,590, or a total valuation of \$3,015,648, compared with a zinc production for the same period last year of 43,954 tons, valued at \$2,004,625, and a lead production of 6448 tons, valued at \$477,720, or a total of \$2,482,345, an increase of valuation over last year of \$533,303.

FURNACES OF ALABAMA.

The Situation at Birmingham Succinctly Described.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., March 18.

The tone of the iron market is decidedly firmer. But for the feeling that iron is high enough an advance would be demanded without delay. And it is safe to say that unless there is a "slump" in iron in the near future there will be an advance from present values. No conservative iron man wants to see any further advance at present and suffer the evils of a runaway market. As the situation here is not fully understood by other sections, let us state it as it really exists.

First, we have 17 furnaces in Alabama out of blast. It is true that two of them have been for some time in a state of innocuous desuetude. But they are listed as belonging to furnace ranks.

Second, those in blast have not been turning out maximum output. It is simply impossible with a lean burden to turn out a fat output either as to quality or quantity, and it has been a lean burden the furnaces have been taking for some time back.

Third, the stock in yards that a short time ago was estimated at 75,000 tons has been reduced by shipments to, say, 45,000 tons. These shipments went, and continue to go, to melters of iron. They are filling only the small holes in the demand, and give but partial relief to existing needs,

for every ton of iron offering finds a buyer ready to take it in.

Fourth, spot iron is becoming scarcer and scarcer, and for prompt shipment commands full prices. In a short time the deficiency in this respect will be so evident that buyers will be scrambling to get meager offerings. Let us illustrate the situation:

A good buyer was here the past week to buy 2000 tons of No. 2 foundry or No. 2 soft, prompt shipment. He authorized \$23 to be paid for it. After a thorough effort he wired his firm to buy it elsewhere, as he could not get it here. Yet spot iron is quoted in some cases, but very few, at \$22.50. It is on a par with "cash in 30 days." Here is another instance of the needs of buyers: A local melter of iron was informed of a lot of 975 tons, the overplus of calculation, and running four grades, that he could get on a \$23 basis for No. 2 foundry. He promptly took it. Two more lots of 400 and 600 tons of the same mixed grades were found and taken by the same buyer, who, but for the scarcity of spot iron, would not have touched it. There were sales of No. 1 soft at \$25, and of No. 1 foundry at the same price, and one sale (analysis iron) was made at \$26.50. Spot iron, though quoted by some at \$22.50, readily commands \$23 and up to \$24 on a No. 2 foundry basis. Sales are reported on this basis, but in only medium and small lots. Spot iron in round lots cannot be had, simply because it isn't available. For the second quarter No. 2 foundry is quoted at \$21.50, and no sales were reported at any less price. For spot, No. 4 foundry brought \$22 in a small way, and for second quarter delivery this grade commanded \$20 for two 1000-ton lots. For this quarter there was also sale of 400 tons at \$22.50 for No. 2 foundry. For the third quarter No. 2 foundry brought \$19.50 for 100-ton to 300-ton lots. There was one lot of 725 tons of mixed grades sold at \$21.50 for No. 2 foundry, second quarter, and \$18.50 last half. For the last half, which, practically, is last quarter delivery, No. 2 foundry sold at both \$19 and \$18.50, and closed with a hardening tendency. There was some inquiry for April and May, but nothing resulted. The above quotations and transactions afford an idea of the irregularities of the market. There has been a veil of secrecy thrown over some transactions. The facts concerning a transaction involving 30,000 tons are percolating through the silence that shrouded it from publicity, and that tonnage should be added to the week these letters reported the sales at 75,000 tons, making a total of over 100,000 tons. Had it been given publicity the true state of the market would have been apparent to the veriest dullard.

Scrap iron is quiet, with an insignificant demand, but with prospects of a better trade in the immediate future. Weller & Co. quote as follows, several grade quotations being changed:

Old iron rails, \$23 to \$23.50.

Old iron axles, \$24 to \$25.

Old steel rails, \$17 to \$18.

Old car wheels, \$20.50 to \$21.50.

No. 1 railroad wrought, \$20.

No. 2 railroad wrought, \$16 to \$17.

No. 1 country wrought, \$16.50.

No. 2 country wrought, \$14.50 to \$15.

Machine castings, \$16.50.

Stove plate, \$13.

Cut boiler, \$13.

No. 1 steel, \$14.50.

There is no change in quotations on cast-iron pipe, and no change in conditions. They are not running after business, but it is constantly seeking them. Prices are unchanged, and we yet quote:

Four-inch and six-inch pipe at \$35.

Eight, 10 and 12-inch pipe, \$33.

Large sizes, \$31.

Extras, 3½ cents.

The large stack at Woodward went out of blast the past week, and they now have but one in service. Some changes have been made in furnace management. T. G. Bush, Jr., formerly with the Alabama Consolidated Company, goes to the Southern Steel Co., and Dowling has gone in as furnace manager to the same company.

The Union Foundry Co., which succeeds the Hercules Company at Anniston, has organized with \$100,000 as capital with H. A. Salzer of La Crosse as president, E. W. Kremers of Wisconsin secretary-treasurer and George Schumaker as general manager. They expect by May 30 to have everything in shipshape and turning out staple iron goods and all kinds of plumbers and gasfitters' goods.

The report of J. C. Maben, president of the Sloss-Sheffield Company, tells lucidly of the difficulties and trials of furnace management in the past 12 months. The furnace output was 31,000 tons less in 1906 than in 1905, and though delivery price was 85 cents per ton greater in 1906 than in 1905, the earnings were \$200,000 less. To those who have had the conviction that the extreme prices were furnace benefits attention is directed to the statement that the average price received for their iron during the year was less than \$13, and that their working capital was reduced by \$200,000. This latter, though, resulted from expenditures in betterments of various kinds, \$183,000 being expended on one mine.

Coal and coke are in fine demand, and prices are firm. For coke the demand has increased, and some round lots were taken, one being for 5000 tons. Inquiries and orders came in from the West and from Mexico. The price varied from \$3.75 to \$4.25. The car situation has improved somewhat, but complaints are as yet quite frequent. Those whose wants are not immediately supplied find fault with delay. On some lines the improvement is in greater evidence than on other. Just why, only a railroad man could tell you. But to a business man it appears as though it was a case of business management. Every railroad man is not a practical business man, nor is he, as a rule, a servant of the people or the patrons of his road.

There was a very important sale of coal lands concluded the past week involving 3600 acres, the property of the State University. But a few years ago similar acreage was sold at \$10 to \$12 per acre. This recent sale was made at \$100 per acre. The purchasers were the Messrs. Adler and the purchase price was \$360,000. It is said to be the highest price ever paid in this State for such property. It certainly shows what a change has taken place in the last few years in the value of coal properties. Development of coal properties continues to be active, and the Pratt Consolidated Coal Co. is taking the lead in it. Their output now is only half of what they expect it to be in a few months. The management tell your correspondent that they have a demand for every ton they can mine.

Aided by legislative enactment, North Birmingham has entered upon an era of improvement and is advertising for bids on 26 miles of curbing, 26 miles of sidewalks, 13 miles of macadam streets and 3000 feet of brick pavement. This is but an evidence of the progressive spirit pervading the district.

Moore & Handley, in discussion with your correspondent upon the business conditions, reiterate their previous expressions and say that their anticipations, based on the demand for all kinds of hardware and machinery, are that business of the largest volume in their history is assured for this year.

J. M. K.

INVESTING AT HOME.**Opportunities in the South for Local Capital.**

In continuation of the discussion of the subject of opportunities at home for the investment of Southern capital in manufacturing, agriculture and general business enterprises, the MANUFACTURERS' RECORD has received the following letters:

Clifton R. Breckinridge, president Arkansas Valley Trust Co., Fort Smith, Ark.:

No better field can be found for the investment of such capital than the section in which it is produced. Your caution against drifting into distant and vague mining schemes is sound and timely. Such business is most speculative except when undertaken by large capital and under the advice and management of men of high character, great skill and ripe experience. Usually the safest use is in lines and under conditions with which the investors are already acquainted, and in a country like the South such uses must be abundant for a long time to come. In this city and section stocks in established good enterprises are difficult to obtain at prices satisfactory to the buyer, for they are held by people who appreciate their value and are able to keep them. We do a large business in the manufacture of wagons, furniture, cottonseed oil and some other lines. Extensive brick and tile making establishments are now being erected. Being in the midst of a great coal and gas field, having a country rich in agriculture of various kinds, with a large area of hardwood in easy reach, and with exceptionally good transportation facilities, our manufactures and trade are increasing, and new enterprises are inviting to those who wish to start them. Our field also affords good opportunities to those who wish to invest in coal, gas, timber and farm lands. The climate is healthy, the water is good and the rainfall is abundant. Between mountain and valley lands people find almost any climate and conditions they want. As for loans, a growing country like this offers a good field. So far, in our immediate locality, they have been met chiefly by local capital, of which there is a good amount. But the country is now growing too fast for this, and to quite an extent good borrowers for time loans can be found beyond the local power to supply them at from 5 to 7 per cent., according to the amount, etc., of the loans.

Wm. Hurd Hillyer, secretary and treasurer Hillyer Investment Co., Atlanta, Ga.:

We beg to answer your questions in order to the best of our ability.

1. How shall the South invest its increasing wealth to the best advantage?

The answer is not far to seek; in fact, it is at our very doors. Without doubt the best outlet for the surplus capital of the South is in the actual development of local resources. We would suggest in this connection a systematic campaign on the part of Southern newspapers, not only by the merely editorial encouragement of Southern enterprises, but even to the extent of excluding the wildcat advertisements of distant mining and development schemes. On the other hand, we believe that local bankers can aid greatly in keeping home funds from drifting off into far-away enterprises by constantly placing before their clients the advantages of the South as a field for investment. The combined effort of Southern newspapers and financial men along these lines could not fail to be vastly productive.

2. The smaller towns of the South have only of late years begun to realize the advantages to be gained by the proper development of home enterprises. This is especially true in our own State. We call to mind half a dozen towns which eight or

ten years ago were so nearly dead as to be interesting only to the poet and antiquarian. These towns have now without exception thrown off the cerements which bound them and have arisen to new life and prosperity. Cotton mills, furniture factories and other profitable industries have grown within their limits. In nearly every case a thriving local bank is the prime mover for these enterprises. The money is no longer furnished in the main by Northern and Eastern capitalists, but is largely furnished from principally local sources. We heartily concur in your view as to the care and sound judgment which backers must exercise in the fostering of these enterprises. Nothing is more harmful in its moral effect upon investors than the spectacle of an unsuccessful manufacturing enterprise started in the wrong place at the wrong time by the wrong people. The past history of our own city is thickly strewn with such disasters, but we can truthfully say that the present is fairly free from them, owing, we believe, to the ingrowing conservatism of financial men and the exercise by them of the discriminating judgment which you so pertinently urge. There is not a town of any size in Georgia—and we believe that a like statement may be made of every other region in the South—where some form of industry will not flourish under peculiarly favorable circumstances. It is our belief that if each town will single out from among the various industries one or more for which it is peculiarly adapted by nature and specialize on that, we would witness a much higher efficiency and a better output in every class of manufactures. This course has been adopted by the various towns of Europe, unconsciously, perhaps, but with the result that through the ages each town has developed a marvelous efficiency in the production of one or more articles which it has long specialized.

3. The general business outlook in our section we regard as very good. The only possible criticism which we would offer is that the activity is so great as to render impossible the most prompt and efficient performance in any direction. The building trades are suffering badly from a congestion of business. This state of affairs, however, will naturally adjust itself and is incident principally to the rapid growth in building operations made necessary by the influx of new population to our city. Despite relatively high rates charged by local banks, which rates may be regarded merely as a reflection of the general money conditions throughout the country, it may be truthfully said that at no time in Atlanta's history has there been so much money in the hands of the middle classes awaiting profitable investment. Hence it happens that Atlanta is becoming a fair field for the mining stock advertiser and the fake promoter, both of whom have hitherto regarded the South as barren territory. Atlanta people, as a rule, eschew Wall Street securities, but they are no more safe than the rest of mankind from the seductive representations of get-rich-quick concerns. It is our earnest conviction that if the masses of the people who have small sums to invest, not only in Atlanta, but throughout the South, will ignore the glowing prospectuses of distant schemers and place their funds through legitimate channels in the development of natural resources nearer home, there will dawn upon the South an era of prosperity exceeding even the one through which we are now passing.

Engineering Company Needs Manager

A company which is engaged in general engineering activity in the South needs a manager for one of its Southern offices. It is prepared to correspond with some capable and energetic man who believes he

can give satisfaction. For particulars address "Engineering Manager," care of the MANUFACTURERS' RECORD.

TO HANDLE CYPRESS LUMBER.**A Million-Dollar Buying and Selling Company.**

[Special Cor. Manufacturers' Record.]
New Orleans, La., March 13.

A call was issued today for the meeting of the stockholders of the Cypress Selling Co. of New Orleans, at which gathering that corporation will be dissolved and arrangements for the liquidation of its affairs will be made. The company, which is now marketing the output of 18 or 20 of the largest cypress plants in the State of Louisiana, will pass entirely out of existence, and will be immediately succeeded by a \$1,000,000 buying and selling lumber company, which will purchase outright the lumber from the mills and then sell it to the trade and consumer. R. H. Downman, president of Cypress Selling Co., and the head of several cypress companies domiciled in Louisiana, will be the president of the new concern, and several of the present members of the Selling Company will hold stock, even though the new company will bear absolutely no relationship to the company which will pass entirely out of existence April 15, the date set for the meeting.

The Cypress Selling Co. as at present operated is a sort of central selling agency for a majority of the cypress mills in the State. It secures the orders for lumber and then apportions them among its members, each mill receiving its fair allotment. Fault has recently been found with this system by reason of the fact that some of the mills received orders for stuff that they did not have on hand at all and were forced to return the orders to the company. While they had big stocks in their yards, they did not have the necessary assortment to fill the orders which fell to their lot. An instance of this was furnished recently in the case of the Lyons Cypress Co. of Garyville, the owner of one of the largest lumber plants in Louisiana. This company's mills have a daily output of more than 150,000 feet. They have recently been cutting considerable lumber, but there has been a comparative assortment in the stock, and the company, when it withdrew from the Selling Company several days ago, had in its yard a stock valued at nearly \$2,000,000 which it could not dispose of through the selling agency. It was forced to withdraw from the company in order to dispose of its big stock. Other mills have been similarly situated, and the result is that the withdrawal of the Cypress Company has practically started the movement which is going to result in the dissolution and liquidating of affairs of the Selling Company.

The \$1,000,000 company which will succeed the Selling Company will be made up of cypress men and other investors as individuals, and not of mills and cypress interests. It will buy where it wants and sell to whom it wants. It will sell an order of lumber to the retailer or consumer and then buy the necessary lumber to fill that order from the mill that will furnish it at the cheapest price. It will be a sort of middleman between the manufacturer and the retailer or consumer, selling to the latter and then buying from the mills. The cypress men who go into the company will go in as individuals, and not as representatives of mills. Many outsiders, that is, men not engaged in the lumber business, will hold stock, while it is also said that the stock of the big company will also be placed on the open market, where anybody who cares to invest in it may buy. Several lumbermen who hold stock in the Selling Company will take blocks of stock in the new corporation, but there are several

others who will not. This will not prevent the latter, however, from selling lumber to the big company, as it will buy from any mill that can furnish it with the stuff it requires and has a demand for.

BIG DEMAND FOR STEEL.**A City to Be Erected Within Salt Lake City.**

[Special Cor. Manufacturers' Record.]
New York, N. Y., March 20.

Illustrative of the tremendous demand for structural steel in this country is the announcement of the plans in charge of Mr. Henry Ives Cobb, architect, of New York, for the erection of 10 big structures for Mr. Samuel Newhouse in the heart of the business section of Salt Lake City, Utah, virtually the building of a city within a city. The structures will comprise an 11-story hotel and nine buildings devoted to banking, store and office purposes. The hotel will be 181x165 feet, and the other buildings will be 11-story bank and office building on the southeast corner of Main street and Exchange place, 80x150 feet; 11-story office building on the northeast corner of Main street and Exchange place, 80x150 feet; Mining Exchange Building, probably eight stories high, 80x80 feet; six-story store and office building, 140x80 feet; store and office building, 11 stories high, 80x150 feet; six-story store and office building, 140x80 feet; 11-story store and office building, 100x100 feet; six-story store and office building, 200x200 feet, and six-story store and office building, 150x200 feet. There will be a power-house and plant in the court of the latter structure, which will furnish light and heat for these and all other buildings Mr. Newhouse may put up later.

The contract has been let to the Thompson-Starrett Company, and ground is being broken. Plans are prepared, and steel orders have been placed in the East. The hotel will be one of the finest buildings of its size ever put up. Mr. Newhouse has made millions out of Utah mines.

For Huntington.

At the twelfth annual banquet of the Chamber of Commerce at Huntington, W. Va., last week President George W. Stevens of the Chesapeake & Ohio Railway stated that the number of passengers who left Huntington by the C. & O. had increased from 96,000 in 1904 to 110,000 in 1906, and that the number of tons of high-class freight handled had increased in the same period from 55,000 to 85,000. Using these figures as an illustration of the growth of trade in the city, he commended the enterprise of its business men in bringing in industries and congratulated them upon the strength of the commercial organization. He assured his audience that work upon a new passenger station would soon be started, and that it would be completed within the next 12 or 15 months, and promised that improvements and enlargements of the railway shop would be made the subject of early consideration by the management. Other speakers at the banquet, which was largely attended, were ex-Governor A. B. White of Parkersburg, Gen. W. J. Hendrix of New York city, Hon. A. E. Kenney of Calhoun county, West Virginia; President Mike Broh of the Chamber of Commerce, Messrs. Frank B. Enslow and George I. Neal and Superintendent Foulk of the Huntington public school.

A recent directory census of Brookhaven, Miss., shows a population within the corporate limits of that place of more than 6500 people above the age of 15 years.

A conference is to be held next week at New Orleans for the purpose of dealing with the relations of the Southern States to the Panama Canal.

CURRENT EVENTS AS VIEWED BY OTHERS

ON MAKING THE CITY BEAUTIFUL.

[New York Tribune.]

The approach of the tree-planting season invests with timely interest one of the features of the yearly exhibition of the Municipal Art Society, which is now on view in the galleries of the National Arts Club. This is an exhibit arranged by Col. John Y. Culyer for the Tree Planting Association, and it represents a design for the material modification of one of the old downtown streets of this city with the view of rehabilitating a much "run-down" neighborhood for the sake both of the tenants and of the property-owners; indeed, of a still wider constituency, since it contemplates the broadening of the street into a much more commodious and useful thoroughfare in a part of the city where such increased facilities for travel and transportation are much needed. Briefly described, the plan widens the present street so as to provide more commodious sidewalks, two roadways, and between the latter, at the center of the whole, a broad promenade. There are three rows of trees, one at each side and one in the center, and the whole effect is to transform the street into a continuous shaded parkway.

There can be no doubt of the attractiveness of such a street or of its effect upon the comfort and health of the people, and also, we should say, upon the value of adjacent property. The example of Fourth avenue in Brooklyn, which has been improved on a similar plan right through one of the very poorest districts of that borough, is sufficiently instructive on those points. If Thompson street, in Manhattan, were improved according to Colonel Culyer's plan, Fifth avenue would have a splendid continuation southward to Canal street, to the great advantage of vehicular traffic, and that whole district of the city would be immensely benefited. At present property along that street is generally in so poor a condition that the expense of such widening would not be prohibitive, and it is not improbable that the increased valuation consequent upon the improvements would considerably outweigh the cost. Another suggestion in this same exhibition is that of a similar rearrangement of 57th street, which would not need widening for the purpose, since it is already one of the extra wide streets.

Such schemes have much to commend them as a means of making the city more beautiful and more agreeable as a place of residence and resort, and would probably prove profitable from a purely pecuniary point of view. From the esthetic point of view, as well as that of comfort and health, the city is greatly in need of more trees in the streets. But we may accept it as practically certain that any satisfactory cultivation of trees can be effected only on streets specially planned for the purpose, in some such way as that indicated by Colonel Culyer. On ordinary streets trees will not thrive, if for no other reason than that the waterproof pavement hermetically sealing the ground all around them dooms them to die of drouth, as well as from the effects of leaking gas and stray electric currents. But on broad streets, where there are a few square yards, or even feet, of open soil around each tree to let moisture get down to the roots, trees will flourish, as was demonstrated on upper Broadway before so many trees were destroyed for the sake of the subway, and as other streets in Manhattan and in Brooklyn still prove. It may

well be considered by the municipal authorities whether it would not be better to multiply the number of such thoroughfares in various discreetly selected parts of the city than to create more small parks. A parkway a mile or two long would probably be a greater benefit to a greater number of people than a park a few hundred feet square.

[Springfield (Ohio) News.]

What are you going to do this spring to beautify your own premises? Going to plant any trees or flowers? Going to paint the fence or tear down the unsightly shed in the rear or sod the parking in front of the house or trim the shrubbery? What are you going to do to add to the physical appearance of Springfield?

To get back to Rome, which was not built in a day. Do you know how it was kept clean? By everyone sweeping in front of his own door. Are you sweeping in front of your own door, or are you waiting for council, that great something which many people expect to usher in the millennium, to send around sweepers? Are you personally doing anything to make Springfield bigger and better and brighter, or are you sitting around waiting for some one to call upon you to joint a procession?

Little neighborhood clubs are a good thing. Organize one on your square and let it have for its purpose the beautifying of your square. It would work wonders if we could have such an organization upon every square in the city, wouldn't it? It would be easier for the big municipal organizations to accomplish something, too, if there were such societies all over town.

Let's move up a notch right here at home. Not next year, but this. It can be done and it ought to be done. And it will have to be done if Springfield expects to retain her place in the list of progressive cities in this country.

[Minneapolis (Minn.) Journal.]

Whether the usual condition of downtown business streets in Minneapolis at this season of the year is to be attributed in any respect to our ward system of street cleaning, that system certainly fails to accomplish results creditable to the city. The only street cleaner who can be relied upon to do anything regularly and systematically on the cross streets is the sun. After the streets have been covered with snow all the winter they begin to look more like barnyards than the streets and avenues of a metropolitan city which prides itself upon its enterprise and thrift and general cleanliness.

Unfortunately, this criticism is due not only to the government of the city, but to many individuals as well, who permit their sidewalks, both in the business center and outside, to be neglected and to be a source of danger and discomfort to pedestrians and a badge of untidiness and sloth upon the individual property.

It is time for us to wake up here in Minneapolis to a proper appreciation of what nasty streets cost as an obstacle to business and a damage to trade, in loss of reputation for the city and in sacrifice of self-respect to the citizens themselves. We can't think nearly as well of ourselves as we could, we cannot be as proud of our city when the evidences of untidiness and unthrift are so conspicuous to every visitor. Let us get a move on ourselves and clean up. It will pay. Other cities can afford to do it. Minneapolis will not confess inability to do as well.

FLYERS AND TRAVELERS.

[Pittsburg (Pa.) Chronicle-Telegraph.]

It was said in a dispatch from Chicago that representatives of the New York Central and Pennsylvania lines at that place smiled when asked about the effort made to bring about slower service between Chicago and New York and suggested that "there are slower trains now by which anyone afraid of the 18-hour schedule may travel." The railroad men miss the point, however, in smile and observation. The nervous ones do not fear that anyone will compel them to ride on the fast trains, but profess a tremor because of the damage a fast train might do to the slow trains were it to run amuck or take a notion to buck along the right of way. The effective answer to the persons who are reported to ask slower service is not that slower trains are run for their benefit, but that neither in theory nor in practice are the fast trains any greater menace to the slow trains than the latter or to each other. Accidents to the flyers, so far as our recollection goes, have involved no disastrous consequences to other trains. If there was any general fear of fast travel on the rail it would be manifested in a boycott of the flyers which would render them unprofitable. If they should become unprofitable that would be the end of them. The Pennsylvania and New York Central officials say that so far as the roads are concerned, the question is one purely of demand and supply. As long as the demand continues it will be met. There is no indication of slackening demand. The one thing that holds patronage of the fast trains in check is the higher rate charged for travel on them. We do not doubt that if the railroads should agree with the nervous persons, by way of a test, to make the rate on the fast trains and the slow ones the same, that it would be the latter that would become unprofitable.

WEST VIRGINIA CLIMATE.

[Morgantown (W. Va.) Chronicle.]

If a local survey only is had, there are grounds for the claim of the old resident that the climate changes. In some restricted districts the change is very marked, due, however, to local influence, and not to anything astronomical or geological.

Let one narrow locality be taken to illustrate this point. The Canaan valley, in Tucker county, was, up to about 1884, an almost unbroken wilderness of laurel, spruce, hemlock, beech and birch. Its elevation is from 3000 to 3400 feet, and its area about 100 square miles. Before the timber was cut and burnt off it was usual for the first snows of autumn to lie unmelted beneath the packed laurel until nearly or quite the first of June. The winter snows accumulated to a depth of six feet in some years, and nearly always as much as three or four feet. The ground was actually covered with snow half the year. The melting of this snow kept the waters flush until late in the spring.

The whole valley has been stripped of its timber. Ax and fire have laid the ground and rocks bare. Probably as much snow falls as in the days of the forest, but it melts, and the ground is laid bare from time to time during the winter; and spring is a month earlier than it used to be, because the snow vanishes a month earlier. * * * The old hunters may be found living on the borders of that changed valley today who will declare that the seasons are growing milder, and they are right, so far as their little world

extends. So, when we hear some old resident remark that the seasons are changing, let us, instead of flatly contradicting him, see if some local condition may not give him excuse for his statement.

If the unrestrained destruction of the forests on the mountain ranges of West Virginia continues for another generation no one will dispute that the climate has changed. The water course will run dry or nearly dry in early summer instead of remaining full and cold for months after that time, and sheltered ravines and flats which held the winter snow until almost summer will become dry gravel beds and stone heaps by the middle of June.

FLYING PANAMA DIRT.

[New York Times.]

As to the Panama Canal, the great engineering questions must be assumed, however rashly, to have been settled before the dirt begins to fly. The army engineers are competent to make the dirt fly more on the Isthmus and less in the halls or lobbies of Congress than any other body of men in their vocation. Moreover, a military engineer in the service of his country does not and cannot take his nomination to an important engineering position on the canal as a stepping-stone to another and more profitable job, as a civil engineer might consider it, quite properly, according to the ethics of his profession. But the main point is that if the Panama Canal is dug by the army engineers the country would have a confidence which in no other way could be instilled into it that for every dollar spent the equitable proportion of a cubic yard of dirt would be made to fly.

TO PREVENT FLOODS.

[Brooklyn Daily Eagle.]

That the floods are caused by lack of forests and that reforesting the mountains would reduce spring freshets to manageable proportions is too clear for argument. Where there are no forests the winter's snow all melts at once in the first warm spring rains, and the accumulated water of the winter is precipitated into the streams at once. That sends the rivers at Pittsburg upward by foot jumps. When the mountains are covered with a heavy growth of trees the snow in the valleys melts and is disposed of before that in the woods has been affected. When the melting in the forest begins, the mat of leaves and mold, covering the soil from eight inches to a foot, acts as a sponge and retains a large proportion of the water. This it gives out slowly through the spring and summer, the last of it going up in vapor under the suns of August. Thus the forest increases rainfall in the summer and serves to keep streams and springs full then which run dry every summer after the mountains have been skinned of timber.

Reforesting has been urged for years to make summer reservoirs for the farmers and mountain mills, without effect. But the fact that the water held back for that use on the mountains would be kept out of the rivers at flood time ought to appeal to the pockets of the great manufacturers and property owners along the Ohio valley. In the recent application for \$18,000,000 in Congress for an Appalachian forest preserve, the fact was brought out that the losses from floods on the Ohio reached that total in a single year. This year the losses will be much larger than the money needed for the park. The effect of the tree planting in restraining the floods would be felt long before the trees

were full grown. The leaf fall of every autumn would contribute to the mass of spongy mold which holds back the water, and the leafage of a brush-grown hill is quite as heavy as that of timbered land. The method of protection is too simple to need argument. The present disastrous losses ought to create just that public demand for the reforestation which is needed to secure national or State action.

WHITE DOMESTIC SERVANTS.

[Mobile (Ala.) Register.]

A housekeeper asks the *Register* to give advice and assistance in the matter of providing domestic help. She says that the situation has become intolerable, as colored help cannot be obtained. In her distress she has written to the paper to ask if something can be done to get white domestic servants by immigration or in any other way. The immigrants who come to this country are of the farming or laboring class, and are ill-fitted to become domestic servants. The only foreigners who are capable of this sort of service are the Chinese and Japanese, and the Chinese are barred out, and the Japanese are likely to be barred out by treaty, it being the consensus that they do not form a desirable addition to our population. The only source of supply is in the Northern States. There is found a class of white people accustomed to domestic service, but it is difficult to persuade these people to come South. They have the idea that the South is a very hot and sickly region, and, besides, they fear that they may come into association with negro servants. Nevertheless, if a considerable number of housekeepers here would organize an association, pledged to employ white servants, and would send a trustworthy agent to the North to explain the peculiarly favorable situation of Mobile in climatic and health point of view and to give assurance of good treatment and good wages, it might result in bringing in so large a number of applicants as to form a basis for a "colony," so to speak. It must be recognized that a half dozen or so of these white servants, if they were all, would find their isolation too great to be long endured. New Orleans has a large number of white servants, principally as help in restaurants. Mobile may be able to get the same sort of help if the business is undertaken in earnest.

TOURISTS IN FLORIDA.

[San Antonio (Texas) Express.]

Six tourist hotels in Florida belonging to Mr. Flagler entertained a total of 189,844 guests during a season of 80 days last winter, these winter hotels opening about January 10 and closing March 31, and remain closed until the following January.

In that short season the receipts of these six hotels amounted to \$1,430,000, an average of about \$3000 a day for each hotel. That the business is profitable is evidenced by the multiplication of hotels, as there are 182 hotels of large capacity besides the six Flagler hostels, some of which have accommodations for as many guests as three or four of the largest hotels in San Antonio combined.

It is estimated that the tourist travel is worth about \$20,000,000 a year to Florida, and it has been very largely built up by the railroads, which did so much toward providing the hotel facilities at the various resorts as well as for the transportation accommodations. This tourist travel to Florida is confined to such a short season that one wonders how the hotels can manage to take in enough money in 80 days to pay for the time they are kept closed. Perhaps the explanation may be found in the class of patrons which such costly and magnificent hostels attract.

SCIENCE IN WAR.

[Boston Evening Transcript.]

As science is applied to war the risks of the profession of arms increase. Sudden death in horrible form has even in time of peace always been one of the perils attendant on armies and navies. Even in the far-off days of muzzle-loading smooth bores, when a 24-pounder was a big gun and all the powder was the primitive black, the magazines of warships had a most unaccountable way of exploding. During the wars of the French Revolution the British battleship *Ardent* disappeared from human ken, in calm weather, in the middle of the Mediterranean. Some of her deck timbers, slightly charred and with pieces of gunlocks and other metallic articles driven into them by a terrific force, left no doubt as to the manner of her fate. But the old ships were safer for their crews. They did not contain great furnaces and steam, hundreds of tons of coal, electric plants, explosives that demanded the maintenance of fixed temperatures, or huge projectiles every one of which carries a bursting charge capable of splintering the hundreds of pounds of steel in which it is encased. The older way was the safer way for all on board.

STEEL-RAIL PRODUCTION.

[Wall Street Journal.]

According to official figures, the United States in the year 1906 produced approximately 4,005,000 tons of all classes of rails, including Bessemer, open-hearth and rerolled rails. This compares with a total production of 3,375,929 tons in 1905, a gain of 629,071 tons. The production of all classes of steel rails in 1904 was 2,284,711, so that the gain of 1906 over the former year was 1,720,289 tons.

The American Iron and Steel Association's figures caused some surprise in the steel-rail trade, as the belief prevailed that the output in 1906 would not exceed 3,700,000 tons. It will be remembered that last year manufacturers also underestimated the country's production.

The official figures have not been completed to the extent of giving the production of open-hearth and Bessemer rails separately. They state that the production of all kinds of Bessemer steel rails by the makers of Bessemer steel ingots in 1906 was 3,705,642, an increase of 569,918 tons. Production from various other sources in 1906 aggregated 300,000 tons, making the total rail production for that year about 4,000,000 tons.

The following table gives the production of all classes of steel rails and pig-iron production over a series of years, and the percentage of steel-rail output to pig-iron output:

	Steel rails. Tons.	Pig-iron. Tons.	Per cent. steel rails to iron.
1906.....	4,005,000	25,307,191	15.8
1905.....	3,375,929	22,992,380	14.6
1904.....	2,284,711	16,487,033	13.8
1903.....	2,392,477	18,009,252	16.6
1902.....	2,947,533	17,821,307	16.5
1901.....	2,874,539	15,878,254	18.1
1900.....	2,385,682	13,789,242	17.3

It will be observed from the above table that the increase in steel-rail production has not moved in sympathy with that of pig iron. For example, the percentage of steel-rail production to iron production in 1900 was 17.3 per cent., and in 1906 15.8 per cent., a decrease of 1.5 per cent.

Twenty years ago the production of pig iron was 6,417,000 tons, and rail production 2,119,000 tons, the percentage of rail production to pig-iron production being 33 per cent. In view of the fact that many millions of dollars have been appropriated for the purpose of increasing the steel-rail output of the country, it will not be long before the United States will have a capacity of more than 5,000,000 tons a year. The Bethlehem Steel Corporation's new plant now in course of construction will, perhaps, turn out 350,-

000 tons a year; the Gary plant at Indiana when completed will have a capacity of something like 700,000 tons a year, and the Tennessee Coal & Iron Co.'s extensions will largely increase the output of that company. The Republic Iron & Steel Co. completed a new rail mill (which has been turning out billets) about a year ago. Other mills are also increasing their output gradually.

That steel-rail manufacture is gradually drifting from Bessemer to open-hearth process is evident from the fact that all the mills now building or contemplated will manufacture the open-hearth rail.

The following table shows the production of rails over a series of years, the percentage of open-hearth to Bessemer, and the average yearly price:

	Bessemer. Tons.	Open-hearth. Tons.	Per cent. open-hearth to Bessemer.	Price.
1906.....	3,705,642	300,000	8.09	\$28.00
1905.....	3,192,947	183,264	5.74	28.00
1904.....	2,137,957	145,883	6.83	28.00
1903.....	2,946,756	45,054	1.52	28.00
1902.....	2,935,392	6,029	0.20	27.33
1901.....	2,870,816	2,093	0.07	27.33
1900.....	2,383,654	1,333	0.06	22.29

*Rolled by producers of Bessemer steel ingots.

Includes open-hearth iron rails, the production in 1906 amounting to 318 tons, and Bessemer rails rolled by non-producers of Bessemer ingots and castings, the production in 1906 amounting to 56,618 tons.

Several of the independent mills over the last several months have been securing premiums on rails subject to special conditions.

From the above table it will be observed there was no large increase in open-hearth rail production in 1906. The increase in this class of rails will not become pronounced until 1908. In view of the fact that the production of iron rails in 1905 amounted to only 318 tons, the open-hearth production in 1906 will not fall far short of the 300,000 tons given in the above table.

FOR ITALIAN IMMIGRANTS.

[Galveston dispatch in Houston (Texas) Post.]

A large fleet of palatial passenger steamers, subsidized by the Italian Government with millions of dollars, has set out to control the immigration business originating at Mediterranean ports, and the principal landing place on the American side will be the port of Galveston.

It is learned from unquestionable authorities that two new steamship lines have just been organized, and their fine steamers are about to steam away from the ports of sunny Italy for American soil. Temporarily these will land at New York, but just as soon as the immigration station is built here and facilities are improved for handling the immigrants, both new lines will enter this port with 12 of the finest passenger liners ever to cross the Gulf of Mexico.

One of the new lines is the Lloyd Italiano with the following steamers: Florida, Indiana, Louisiana, Virginia, Cordova, Mendoza, Principessa Iolanda and Principessa Mafalda.

The second new line which is also being promoted for the Galveston service is the Lloyd Sabauda line, which has the following steamers ready, the first of which sails for New York on April 22: Re D'Italia, Regina, D'Italia, Principe di Piemonte. The Texas is now being built for the Lloyd Italiano line and should be included in the list enumerated in the foregoing.

All the steamers in this service are the newest and best adapted for the immigration trade that money can buy. The Italian Government is furnishing the capital to promote this immigration business along the tremendous lines which are being laid out, and that fact is sufficient within itself to prove that they mean to control the traffic from the Mediterranean ports.

In conjunction with the Italian lines is

the Austro-American line, which is represented by Italian Consul C. Nicolini of this port as general immigration agent. It is known that these interests have been amalgamated with a view of fostering immigration business in the Southwest.

Coming on the heels of the announcement in the *Post* a few days ago of the Italian Royal Mail line, which is soon to enter this port, and the Hamburg-American line, also, to bring immigrants here, the story today of two more immigration lines will doubtless startle the most unconcerned citizen.

AMERICAN AUTOS.

[Chicago (Ill.) Tribune.]

The adaptability of the American has long been recognized the world over. Given the right kind of machinery, the proper materials and sufficient financial backing, there is nothing it is impossible for him to attain. That characteristic which has been the national pride is again illustrated in the automobile industry. The American builder uses the best materials, he utilizes every possible method of saving where that may be done without sacrifice of strength, his appreciation of correct design and beauty of finish is unsurpassed. It is a pleasing thought, therefore, though one not specially surprising, that the Americans are now able to hold their own with the foreign builders. It is alleged that the foreign manufacturers are buying American products and employing American workmen, a good indication of the trend of events that is helping to make the American manufacturer more confident of his ability to meet foreign competition.

RAILROADS FOR CHINA.

[New York Journal of Commerce.]

There is nothing to which the Chinese are devoting themselves with so much enthusiasm at the present time as the construction of railways. They relieved the American Syndicate of the task of constructing the Hankow-Canton Railway, and they are very intently watching for an opening to invalidate the contracts held by other foreign syndicates for railroad construction. It is true that the success of native Chinese enterprise in railroad building has not been brilliant. A line was recently completed from Swatow to Chaochow, which was built entirely by Chinese capital. The road is 30 miles long and was placed in the hands of Japanese contractors, but it has cost upward of \$3,000,000 and has taken two years and one-half to build. The road projected from Peking to Kalgan on the great caravan route that traverses the Mongolian desert is also in Chinese hands, and it is proceeding with characteristic slowness. Russia has some interest in this road and has taken occasion to express dissatisfaction with the tardiness of its progress. Another Chinese line has been projected southward from Shanghai to Hangchow, and the first sod in its construction was turned some six weeks ago. The formation of native provincial railway companies in China is meeting strong support from the Central Government, and last month the Waiwupu, the Peking foreign office, asked the governments of the provinces interested to undertake the construction of a railway from Tientsin to Chinkiang on the Yangtze. The route is identical with that covered by a mixed British and German syndicate, and the Waiwupu's request appears to be prompted solely by the desire to thwart foreign claims on this proposed railway. Even the British concession for a railway from Shanghai to Nanking, which is being energetically carried out, has encountered all manner of obstructions from the Chinese authorities. In short, nothing could be imagined in greater contrast to the Chi-

new attitude toward railroad construction 10 years ago than that which both the Central and Provincial Governments are exhibiting today. Following the concessions extorted by Russia for railroad construction in Manchuria there was granted in 1898 to British, German, French and Italian syndicates the power to construct a network of railways throughout the empire. Following the concessions, and undeterred by several conspicuous failures, Chinese bankers and merchants appear ready to furnish the capital for native railroad enterprise. But whatever temporary miscalculations may retard its progress, the era of railroad construction in China has fairly begun, and within the next 10 years the world is likely to see the Indian railroads, which are already extended to the Burmese frontier, placed in direct communication with lines having their termini at Shanghai and Peking.

FRUITS OF HYSTERIA.

[New York Globe.]

Eleven years ago, almost upset by a business and industrial depression that made 3,000,000 men workless, this country righted itself. Under the pretense of protecting the masses against the predatory rich, disturbing legislation had been enacted and other legislation more disturbing was threatened. The people were taught that they were being robbed, that an unscrupulous money power was in conspiracy against them. Prejudice was fed, hysteria stimulated. Confidence was destroyed, and with its disappearance went general prosperity. It was then perceived the only way to restore prosperity was to restore confidence, and that the only way to restore confidence was by a rebuke to the trouble makers—trouble makers all the more dangerous because many of them were sincere and genuinely believing that the public was being wronged. The rebuke was administered most wholesomely and effectively, and immediately the country emerged from the slough of despair, the mills and the railroads became busy, agriculture became profitable, the army of idleness melted away as its members enlisted into the ranks of the employed.

For several years, mindful of the hard lesson that had been learned, the business of the country went on in reasonable harmony to every man's profit. But forgetfulness came. In various forms the doctrine, in a new habilliment and bearing a new name, that had caused the trouble in 1896 began to re-manifest itself. Public men, some because they did not know any better, and some because the applause of the unthinking multitude is sweet to their ears, stimulated its acceptance. Newspapers and magazines gave it countenance and encouragement. Attention was solely focussed on the bad things in our industrial life to the exclusion of the corrective recognition of the good. In the last year this manufacture of distrust has gone on apace. The idea that everything is wrong has so possessed the mind that those courageous enough to stand against the popular tide and utter warnings as to the inevitable consequences have been derided as enemies of the people. They have been run over and abused, their motives attacked, their political extinction prophesied.

Is it surprising, therefore, that the effects of this policy should begin to appear? If men are steadily and persistently instructed that rottenness everywhere exists, is it not certain that many of them will act according to the instruction? No law can be drawn to compel capital to invest if it fears for the future. Its fears may be unreasonable, but this makes no difference. Abuse large industrial corporations, indulge in general as-

saults on their managers, threaten them indefinitely with dire punishment for unnamed offenses, and the structure of our business edifice is such that confidence cannot be maintained. To shut our eyes to concrete evil may be objectionable, but it is not more objectionable than the over-emphasis and exaggeration of the bad. The latter policy is likely to make more empty stomachs than the former.

STIRRED FOR A WATERWAY.

[Chicago (Ill.) Record-Herald.]

Congress has shamefully neglected the Illinois and Mississippi river improvement project which is needed to provide a deep waterway from Chicago to St. Louis and to the Gulf of Mexico. Every few years for a decade or more an appropriation has been made for a survey in anticipation of the beginning of the work, but all Congress could be induced to do at the session just finished was to make another small appropriation for another survey. There were too many useless projects to be encouraged as special favors to particular congressmen for Congress to have any time to think of the great and permanent needs of the whole middle West.

Illinois is not letting the matter drop. At the session of the Legislature two years ago a commission was ordered to investigate the subject, and its report is now in the Governor's hands, waiting for submission to the Legislature. The report does two things. First, it shows the commercial importance of the project, which no one familiar with the situation can deny, but which it is very useful to have described in detail in an official report. Second, it gives the opinion of Engineers Randolph and Cooley on the practicability of the work.

It has not been decided as yet, apparently, just what legislation will be recommended by the Governor to the Legislature. Illinois could afford to build the deep waterway all by itself. But it would not be right for Illinois to do it; and that for two reasons—first, because Chicago has already contributed the Chicago-Joliet section, the most costly and difficult part of the work, and second, because the benefits will be spread over many surrounding States. Even if Illinois should improve the Illinois river, which it ought not to be called on to do, the improvement of the Mississippi would remain for Congress to provide for.

If Illinois can start a movement among the middle Western States strong enough to make Congress understand that the time for dilatory measures has passed, and that this improvement should be commenced in the immediate future, it will be a good thing. The Governor's full recommendations will be eagerly awaited.

MANNING COAST DEFENSES.

[Pittsburg (Pa.) Dispatch.]

Although the Government has a system of coast defenses that has cost \$72,000,000 to date and will require \$50,000,000 more to complete, the total trained force available for working these guns would furnish only one-third of one manning detail. * * * Arising out of this situation Assistant Secretary of War Oliver has proposed a plan for training certain companies of the State militia in the duties of the coast-artillery service. The first experiment will be made this summer with men from the New York National Guard. If successful, it will probably be extended to the guardsmen of other States. In this way it will be possible to assure the availability of trained artilleryists without the necessity of maintaining a regular force three times as large as needed in peace.

No suggestion that has been made for utilizing the guard has been more practical than this. Modern warfare in the

navy and the coast artillery has come to be a matter of technical skill that cannot be acquired hastily. For that matter, neither can any branch of military training; but long practice is especially essential in handling the intricate machinery of the coast defenses. The maintenance of one manning detail in the regular establishment will not be burdensome, where three details might be both difficult to get and expensive to keep up. The co-operation of the State troops will save the Government this money and assure a larger reserve.

VALUE OF CRANKS.

[Springfield (Ill.) News.]

Nearly everything that has been of use to man has been combated; nearly every man who has done anything worth while in this old world has been dubbed a crank, or idiot, or dreamer, or knave. When an anesthetic was first discovered, sermons were preached against it. People claimed that it was sinful to prevent pain; that if God had not wanted men to suffer he would never have invented pain, and, besides, pain was beneficial. The "shock" that came from a surgical operation was helpful—if the operation did not prove fatal. If it had been intended that man should resort to an anesthetic, he would have been born with a bottleful of it in his hand. That is the way people talked about so good a thing as chloroform.

We have a few "cranks" in this city. They are trying to do things. Lesser Sir Walter Scotts say they are trying to light a city with smoke. People who have no ideas of their own take no stock in other people's ideas because they cannot see them. As a matter of fact, the fellow who has no "cranky" ideas is a poor sort of a stick with which to stir up the sleepers. The city in which the most "cranks" live is the city that is the best to live in. We ought to feel mighty proud of the ones we have and encourage others to come here and live.

CHARLESTON'S DRYDOCK.

[Charleston (S. C.) News and Courier.]

The great drydock at the Charleston Navy-yard was finished yesterday, the last stone being laid in the coping at two o'clock P. M.

The big drydock, which will no doubt be turned over to the Government in a few days, as soon as some clearing up is accomplished, was begun by the New York Continental Jewell Filtration Co., contractors, in November, 1902. There were, of course, some preliminaries before any actual work was done, but in the month and year mentioned workmen began to drive the "sheet piling" which served to protect the excavation. Since that time, without serious delays, the work has gone forward. The original estimate for its construction was \$1,250,000, but modifications have been made in the first plans, and the dock as it stands today cost Uncle Sam just \$1,000,000. It is 608 feet long from inside the coping to the apron, 154 feet wide, inside measurement at the top, and 84 feet wide on the floor. From the top of the coping to the foundations is 56 feet, and the depth from the floor to the coping is 42 feet. An 11-foot grating shows the position at the south side, near the apron, of the entrance to the pump well, where four 30-inch pumps will draw the water from the dock when closed with a ship inside.

All of the most modern mechanical means have been employed in the work, steam dredges, hoisting machinery, etc. It was expected when the work began that the foundations would have to be piled, but before nearing the level of the proposed bed marl was found, hard as rock, and a great many feet of the excavation was accomplished with the aid of

dynamite. This was found sufficiently solid for foundations, and the work was approved when 15 feet of concrete laid on marl made the bed for the granite flooring.

There are 8500 cubic yards of granite lining in the dock and 63,000 cubic yards of concrete. Two hundred thousand cubic yards of earth were excavated, and the total amount of material handled over the dock was 400,000 tons. This was carried in 100,000 loads, and of that number but a single load was dropped, no serious consequences following, however. The first piece of stone was laid in March, 1905, and the last March 16, 1907, both put in place by the same man, who came to Charleston from Canada to take position with the contractors at Charleston.

WHY NO FAILURES ON MARCH 14.

[New York Times.]

There were no failures to add to the excitement, and were it not for the state of mind of the brokers themselves the term panic could not be applied to yesterday's market. The panic was mostly on the floor of the Exchange, for those who were selling were not men accustomed to stand around the tickers in brokerage offices and call out their orders.

The losses which have been suffered of late, however, cannot be borne even by the millionaire type of speculator without something giving way under the strain. The losers were able yesterday to make good their margins, and those who have not sold out may be able to make their margins good again today, but the losses will tell, nevertheless.

Some idea of the shrinkage that has taken place in stock-market values since the opening of the year is shown by the fact that the 25 stocks or thereabouts that were most active yesterday show a total shrinkage in value since January 1 last of over \$970,000,000.

Here are figures showing in detail the proportions of the shrinkage in value:

Company.	Capital.	Jan. 1.	Shrink- since age.
Amal. Copper.....	\$153,287,900	35%	\$54,000,000
Am. Smelting.....	50,000,000	40%	20,000,000
Anaconda.....	30,000,000	13%	24,000,000
A. T. & S. F.....	102,998,000	23	23,500,000
Balto. & Ohio.....	152,174,900	26	39,500,000
Brooklyn R. T.....	45,000,000	34	15,500,000
Canadian Pacific.....	120,530,500	25	34,000,000
Che. & Ohio.....	62,733,700	18	11,000,000
C. M. & St. Paul.....	82,913,100	24%	21,000,000
Con. Gas.....	80,000,000	23%	18,000,000
Gen. Electric.....	63,658,400	24	16,000,000
Great North. pf.....	149,577,300	57%	87,000,000
*Gt. N. pf. ore cts.....	149,577,300	27	40,000,000
Missouri Pacific.....	77,450,000	23%	21,500,000
National Lead.....	20,713,600	23%	5,000,000
N. Y. Central.....	178,622,000	20%	35,500,000
Norfolk & Western.....	65,000,000	20%	13,000,000
Northern Pacific.....	155,000,000	73	113,000,000
Penna. R. R.....	311,677,150	24%	62,500,000
Reading.....	70,000,000	44%	31,000,000
Rep. I. & S. pf.....	20,852,000	18	4,000,000
Southern Pacific.....	197,849,200	23%	47,000,000
Union Pacific.....	195,479,100	60%	117,000,000
U. S. Steel.....	508,485,200	15%	79,000,000
U. S. Steel pf.....	360,314,100	9%	36,000,000
Total.....			\$971,500,000

*Have no par value. Certificates were distributed one for each share of Great Northern preferred stock.

Were the entire Stock Exchange list included in the estimate the total shrinkage would probably be several times the amount named. Never, it is safe, to say, was there such a wholesale cutting down of values in such a brief period.

The Street can draw its own inferences. In seeking to determine whether the remarkable events of the day are to be ascribed to general conditions which might inspire the fear that everything is going to smash, or by individual conditions, the Street may be further aided by taking notice of the fact that some of the most important men in the financial community are away—in the South, on the ocean, or in Europe. Upon such occasions absence is indeed conspicuous.

TO THE POINT.

[New York Sun.]

It is worth something to know that the Southern mill men will never be permitted

to take liberties so long as union labor has the large ear of a sympathetic and submissive Government. In the long run the facts are always valuable. Even the most timid and invertebrate and elastic are better off for an exact understanding of their predicament. And that predicament, as we understand it in the light of these recent revelations, amounts to an affectionate alliance of the Government and union labor against capital and free industry.

HIGH WATER IN THE OHIO.

[New Orleans Times-Democrat.]

The first effect of these heavy rains has been to cause the flooding of lowlands and many washouts, with consequent interruption of railroad traffic and some loss of life. This has already been followed by freshets in the smaller streams. The Ohio will probably pass the danger line at Cincinnati in the next few days, and some inconvenience and loss may be expected along its banks; but unless the rains should continue uninterrupted for a week, there is little likelihood, except near Pittsburg, of as bad a flood in the Ohio as that which occurred in January and February. So far the property damage has been confined to losses caused by the heavy rains, mainly in the upper portion of the Ohio basin. The new Ohio freshet will make itself but little felt below in the Mississippi. The river here has fallen more than four feet, and as it will be several weeks before the crest of the Ohio wave reaches New Orleans, the river will have gone down three or four feet more by that time. Had such heavy rains fallen in the Ohio valley in February as have recently fallen there it would have made the levee problem more difficult, but there is no reason to doubt that the levees would have withstood the pressure even under more unfavorable conditions. As for the Ohio, the people living along its banks have, by the course they have pursued in forest destruction and by their defiance of other laws of nature, rendered it the most irregular and unreliable of streams, one day so low as to be unnavigable, the next so flooded as to be dangerous.

FOR EXPOSITION THROGS.

[Norfolk Virginian-Pilot.]

To say that it is of the first importance to both Norfolk and the exposition that adequate transportation facilities be provided between the city and the exposition grounds is to but state what must be perfectly obvious to all who have given the matter any consideration at all. Upon this not less than upon the housing and feeding of visitors at fair and reasonable rates depends the success of the celebration, and therefore the measure of the resultant benefits to the city. People flocking here this summer will come for the primary purpose of visiting the exposition and not to spend their time standing on street corners or docks waiting for means to reach the grounds. If it once becomes noised abroad that facilities in this respect are inadequate, the exposition will receive a black eye and hundreds of thousands of prospective visitors will be kept away. This is as certain as it is that an exposition is to be held.

INTERNATIONAL COTTON.

[Charlotte (N. C.) Observer.]

Not only can the South, granted sufficient labor, supply the increasing demand for cotton, but the foreigner will have no difficulty in getting his share. The Constitution of the United States forbids export duties, and so long as business is business, whoever comes down with the price will get the goods without the least regard to nationality or whether he is Teuton, Celt, Dago, Slav or Mongol. Inasmuch as the American spinner

must bid against the foreigner, talk about "surplus available for export"—a phrase properly applicable almost solely to tariff-protected products—has a rather empty sound in this connection. King Cotton's subjects abound throughout the earth, but his throne is immovably fixed in the Southern States of the American Union.

WORLD'S IRON TRADE.

[London Iron and Coal Trades Review.]

The year 1906 has been an annus mirabilis, whether viewed from the local point of view of the British ironmaker or regarded from the international aspect of the progress of competitive nations. In respect to the former it is to be noted that in 1906 all but three of the leading iron-making districts have produced more pig-iron than in any former year. As regards the latter, the total make of pig-iron throughout the world has been largely in excess of that of any previous 12 months. The returns of production are not available for more than a few countries up to the present time, but the cases in which the output has not exceeded that of any previous year would appear to be very few, and the total output for 1906 may be taken at about 59,000,000 tons, as against 53,000,000 tons in the year 1905. The make of pig-iron for the three principal countries has been 47,934,647 tons, which leaves only about 11,000,000 tons to be contributed by all the rest of the world. Great as the progress made in 1906 has been, it has not equaled that achieved in 1905, when the world's output of pig-iron made a jump of nearly 10,000,000 tons. The greatest advances made in 1906 have been as under:

Production of Pig-Iron in Three Leading Countries.		
	1905.	1906.
	Tons.	Tons.
United States.....	22,992,380	25,307,191
Germany.....	10,987,623	12,478,068
Great Britain.....	9,592,737	10,149,388
Totals.....	43,572,740	47,934,647

The increase of production in 1906 over 1905 was 4,361,907 tons, which is only about one-half of the increased output of pig-iron by the same countries in 1905 over 1904. The difference is mainly due to the reduced rate of increase in the United States, which in 1905 produced 6,495,347 tons more than in 1904, as against an increase of only 2,314,811 tons in 1906. The increased output of Germany in 1906 was 1,490,445 tons, while that of Great Britain was 556,651 tons. The amount and percentage of increase of output in each of the three countries were as under:

Increase of Production of Pig-Iron in 1906 over 1905.		
	Quantity.	Percentage of increase over 1905.
United States.....	2,314,811	10
Germany.....	1,490,445	13.6
Great Britain.....	556,651	5.8

TENNESSEE'S MINERAL WEALTH.

[Nashville (Tenn.) American.]

While we have thus been sitting idly by, letting our mineral resources remain unknown, the States all around us have had bureaus for collecting and publishing information as to their resources, and they have, as a natural consequence, been reaping the fruits of their enterprise in the developments that have resulted. Alabama is most nearly comparable with us, but has not our variety of valuable deposits, and yet her annual mineral production is about double ours. She has for years sustained a State Geological Survey, which has scattered broadcast information as to her coal and iron deposits, and she has found that it pays.

A geological survey would directly benefit the land owners of the State and would lead to investments and developments that would benefit all other classes, so that it is not a measure for the benefit of only a few. The mineral industry is already important enough to justify such a survey, and the investments that would

soon follow would make it a source of revenue instead of an item of expense.

All parts of the State would share in the benefit. East Tennessee has its coal, iron, marble, zinc, lead, copper and other deposits; Middle Tennessee its oil, gas, phosphate, iron and cobalt, and West Tennessee its artesian waters and mineral springs, its sands for building, molders and glassmakers; marls for fertilizers, and its clays of the finest kinds for pottery and porcelain.

INSURANCE.

[Springfield (Mass.) Republican.]

The three big New York life insurance companies suffered a considerable decline in new business written in 1905, the year of the exposures, but the other leading companies of the country on the whole were not seriously affected. During the past year, however, the three big companies suffered far worse than in 1905, and the other companies have not escaped the natural effects of the great public uncovering of life-insurance extravagances. The Wall Street Journal has brought together the following aggregates of new business written last year by the three big companies and 28 other American life companies, in comparison with the new business of the two previous years. The figures are for thousands of dollars—000 being omitted:

	1906.	1905.	1904.
Big three companies.....	\$343,362	\$621,601	\$791,580
Twenty-eight other companies.....	560,080	578,219	531,315
Total 31 companies.....	\$903,442	\$1,199,821	\$1,322,895

The three leaders have evidently been pretty savagely by the disclosures and the resulting reform legislation, but the pace of the smaller companies would seem to have been checked not greatly. Even they, however, must show progress in reducing expenses in order to recover popular confidence in the old measure.

LOUISIANA'S SULPHUR.

[New Orleans (La.) States.]

If it should happen that His Satanic Majesty should find occasion to replenish his sulphur supply in order to keep the works going in the region of gloom and despair, he would probably make a bee-line for Sulphur City, Calcasieu parish, in the southwestern part of Louisiana. There the supply of sulphur is so abundant and the product is so pure as to place the owners of that field beyond the fear of competition on the part of any section of the world.

Hitherto, or at least until quite recently, the consumers of brimstone have looked to the famous deposits of Sicily for their supplies of sulphur, and as there is considerable demand, the practical monopoly that Sicily has long controlled has been a source of great revenue to the people. For many years the rich deposits beneath the soil in Calcasieu have been familiar to the people, but there were certain difficulties in the way that prevented its full development. In the fullness of time, however, the Standard Oil interests discovered the possibilities in the Calcasieu field, and it proceeded quietly to annex them. Even then for a time there were problems connected with the mining of the sulphur which for some years seemed to make the work unsatisfactory and unprofitable.

However, new inventions and improved appliances were experimented with and developed, and the difficulties in the way were successfully overcome. Today the yield is prodigious and sulphur is being shipped every day from the Calcasieu mines to all portions of the civilized world. So rapidly has this lucrative Calcasieu industry developed within the past few years that the Italian Government, disturbed over the headway that Louisiana sulphur was making in competition with

the Sicilian product, sent a commission of scientists over to investigate and to report upon the situation.

After an exhaustive study of the field that commission returned to Italy, and a dispatch from Rome during the week just ended quotes them as reporting to their Government the utter impossibility of the Sicilian mines competing successfully with those of Louisiana. They report that the Louisiana sulphur can be laid down in Europe for \$13 a ton, while the cost of the Sicilian product is from \$20 to \$22 per ton. With such a lead as that in favor of the Louisiana field, the commission recognizes that Italian competition is out of the question, and they therefore recommend, as the wisest thing to do under the circumstances, a combination between the two interests. * * * The matter can be left to those who have a direct interest in the disposition to be made. What is more to the point is the acknowledged fact by her only competitor that Louisiana is so far in the lead in this industry as to make competition with her out of the question. It is to be regretted, to be sure, that the industry is not controlled by citizens of Louisiana, as in that event the enormous profits that accrue from the operation of the mines would remain with us; but it is nevertheless an important source of revenue to the State, in the way of taxes, employment of labor and other incidentals necessary to the conduct of an enterprise of such magnitude.

These deposits, it is said, seem to be practically inexhaustible, hence the mining of the product will continue to be a wealth-giving industry, and the whole State will be, in more or less measure, a beneficiary of its advantages. With its great natural deposits of salt, sulphur and petroleum, Louisiana no longer occupies the back seat in the matter of mineral wealth. Still there are many evidences going to show that "the half has never been told."

TOO BUSY.

[Troy (N. Y.) Times.]

While Wall Street may have its traditional and characteristic furies, the rest of the country is so busy in legitimate fashion that the disturbance attracts little attention. The "brain storm" in the Stock Exchange may set the bulls and bears on a wild rampage, but most persons outside give little thought to the rumpus. They have other and more important business to look after. They are running mills, filling orders and earning wages in an era of activity and prosperity such as has never been seen before. This fact is made impressive by some recently published information, particularly that which goes to indicate the prodigious production and consumption of the United States.

An accredited estimate puts the annual value of American manufactures at \$15,000,000,000. This means that the United States is far ahead of every other country in this line, and that the American people utilize a greater share of such products than any of their contemporaries. It is the processes involved in this unparalleled manufacture, the maintenance of the multitudinous industries concerned, the prodigious traffic essential to the transportation of material, crude and otherwise, and the distribution of the finished product that make up the internal commerce with which the country throbs and staggers. These conditions help to explain why a mere trifle like a Wall Street "panic" fails to shake the general equanimity.

Cotton manufacturers of North Carolina and South Carolina are to meet March 21 at Charlotte, N. C., to discuss the question of shipments of cotton from the Mississippi delta.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS' RECORD. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

Summerville Cotton Mills.

The MANUFACTURERS' RECORD of November 1, 1906, reported the plans of the Summerville Cotton Mills of Summerville, Ga., for the erection of a cotton factory. This company has now about completed the mill buildings and operatives' cottages, including a main structure 343 feet long by 101 feet wide. There will be installed 5000 spindles and 120 looms for the manufacture of cotton duck in weights from 8 to 14 ounces and in widths from 29 to 40 inches. This is 4000 spindles more than originally announced as to be installed to begin with. The Lowell (Mass.) Machine Shop is the architect-engineer for the plant, and is furnishing the necessary textile equipment. An engine built by the Hoovens, Owen & Rentschler Company of Hamilton, Ohio, and a boiler built by the Atlas Engine Works of Indianapolis, Ind., will furnish the necessary power. The Summerville Cotton Mills is a \$150,000 corporation, and its president is John B. Taylor. It expects to begin operations by August.

Big Woolen Mill.

The Chatham Manufacturing Co. of Elkin, N. C., has just begun actively the construction of its big woolen mill at Winston-Salem, N. C., of which the MANUFACTURERS' RECORD presented details last September. This will be a six-set blanket mill, for which all the machinery has been purchased, and the equipment will include magazine looms. By September 1 the company expects to begin manufacturing fine wool blankets. The plans as originally announced call for a main building two stories high, about 100x250 feet in size, cars, mules, looms, dyeing apparatus, wool-washing plant, 200-horse-power Corliss engine, return tubular boilers, etc., to cost about \$150,000. The company increased its capital stock from \$50,000 to \$350,000 in connection with its plant for thus extending its manufacturing facilities. Its architects are Messrs. Lockwood, Greene & Co. of Boston, Mass.

Cotton Mill for Harms, Tenn.

The MANUFACTURERS' RECORD of March 7 referred to the incorporation of the Valley Cotton & Grain Manufacturing Co., with capital stock of \$75,000. This company proposes to build a cotton mill to be operated in connection with a flour mill owned by the Harms Milling Co. at Harms, Tenn. It will install from 5000 to 6000 spindles for manufacturing 30s to 40s single and two-ply yarns, and will add to the present water-power plant so as to provide from 225 to 250 horse-power. The cost and other details of buildings and machinery are now being estimated, and probably in 30 days the company will begin to award contracts. Mr. G. F. Pitts, president of the Harms Milling Co., is managing the new enterprise.

Proposed Cotton Mill.

Mr. Paul Barringer, secretary-treasurer of the Tuscarora Cotton Mill, Mt. Pleasant, N. C., contemplates organizing a company to build a cotton mill at Rockwell, N. C. He plans to install 5000 spindles for the manufacture of two-ply skein yarns, No. 30, the machinery to be driven

by electricity from the Whitney Company's water-power-electrical development. After the mill is manufacturing yarns a weaving department may be added to produce cloth and an overall factory to manufacture the product. No plans have been prepared, nor will be until the stock of the company is subscribed. Mr. Barringer will be president.

Roanoke Knitting Mills' Branches.

The management of the Roanoke Knitting Mills of Roanoke, Va., has decided to add to its manufacturing facilities by establishing three branch mills at Martinsville, Luray and Pulaski, Va. It is stated that each mill is to be equipped with 105 knitting machines and accompanying apparatus, and that the company has increased its capital stock to \$100,000 in connection with these branch mills. A dyeing and finishing plant has been erected recently at Roanoke by the company to handle the product of the various plants.

Smith Cotton Mill Co.

The MANUFACTURERS' RECORD of December 6 reported the Smith Cotton Mill Co. of Bessemer City, N. C., as completing details for erection of its proposed 6000-spindle plant. Construction work is now in progress, and all the required machinery has been purchased. There will be installed 5000 spinning spindles, 3000 twister spindles and other machinery for the production of yarns. The company is capitalized at \$100,000, and J. A. Smith is president.

Additional Gaston Mill.

The Gaston Manufacturing Co. of Cherryville, N. C., has engaged Messrs. Stuart W. Cramer & Co. of Charlotte, N. C., as architects for its additional mill recently referred to by the MANUFACTURERS' RECORD as to be erected. The new building will be of modern construction, 77x243 feet in dimension, to be equipped with 5000 spindles for the manufacture of 40s two-ply yarns from staple cotton. About \$125,000 will be the cost of the completed plant.

Cotton Mills for Texas.

Messrs. Britton Bros. of Dallas, Texas, plan the organization of a number of corporations to build cotton mills in Texas. They have submitted several propositions to the investors of different Texas cities. At Palestine, Texas, Messrs. Britton Bros. submitted a proposition last week to furnish \$75,000 capital provided local people subscribe \$25,000 for building a 5000-spindle plant.

Watts Mills' Enlargement.

The Watts Mills of Laurens, S. C., awarded contract to Messrs. T. C. Thompson & Bros. of Birmingham, Ala., for the erection of the addition recently mentioned. This is an addition to the company's weave shed, and 8000 spindles will be added, the building and machinery to cost about \$80,000. Mr. J. E. Sirrine of Greenville, S. C., is the architect in charge.

Bellevue Cotton Mills.

It was recently announced that C. F. Boyer of Newport, Tenn., intended to establish the Bellevue Cotton Mills. He has purchased the plant of that name in Newport and is installing 5000 spindles for the manufacture of yarns, but the looms which have been in position will not be operated for the present.

Textile Notes.

The Francis Cotton Mills of Troy, N. C., has increased authorized capital stock to \$225,000.

The Cherryville (N. C.) Manufacturing Co. is now installing its additional ma-

chinery recently mentioned, about \$20,000 being expended. Nine twisters of 208 spindles each and 14 revolving flat-top cards, etc., are included in the apparatus.

The Baltimore (Md.) Rug Manufacturing Co. has been incorporated with capital stock of \$5000 by Messrs. J. Edward Kilalea, Samuel E. Ottenheimer, Warren W. Brown and Howard E. Cruse; offices at No. 2 W. Preston street.

About \$150,000 has been subscribed to the stock of the proposed cotton-mill company at Dublin, Texas. A \$200,000 company is proposed, and the Commercial Club expects the enterprise to be an assured one in the near future.

It is understood at Oklahoma City, O. T., that Eastern capitalists will build there a cotton mill of 6000 spindles and complement of looms to represent the investment of about \$100,000. Messrs. Bissell & Bissell represent the principals.

The Randleman (N. C.) Hosiery Mills Co. has been organized to combine the Pearl Hosiery Manufacturing Co. and the Randleman Hosiery Mills and increased capital stock from \$25,000 to \$50,000. Mr. A. N. Bulla is treasurer of the new company.

It is understood that the Rhodes Manufacturing Co. of Lincolnton, N. C., will soon complete the installation of equipment and begin manufacturing. This company was organized last year for the purpose of building a plant of 5000 spindles for the manufacture of coarse yarns, and is to use electricity for power purposes. Its president is John M. Rhodes.

Big Rice Mill and Elevator.

By the time the season begins for milling rice at Houston, Texas, that city will have a new big mill and elevator plant located on the Houston ship canal. This new enterprise will be established by the Pritchard Rice Milling Co., which has just been incorporated with a capital stock of \$100,000. The company will build a modern mill with a daily capacity of 3000 bags of rice, which is said to be nearly double the capacity of the several rice mills now being operated in the city. Messrs. Hayes & Jones have prepared plans and specifications for the construction of the buildings, to include main structure of brick, four stories high, 65x70 feet; warehouse, 125x200 feet; elevator, 60x70 feet, 114 feet high. This elevator will be located within 30 feet of the channel and have traveling elevators to lift rice from barges. Contracts for milling and elevating machinery have been awarded. The new company's officers are Jonathan Lane, president; Paul F. Pritchard, secretary and treasurer, both of Houston. Messrs. Andrew Brown and W. T. Eldridge of San Francisco, Cal., are interested. In referring to this enterprise it has been stated that while New Orleans (with its 14 rice mills) is considered the center of the rice market, about 400,000 bags of rice being grown in territory tributary to that city, yet Houston territory (within 150 miles of that city) yields 2,000,000 bags of rice. Therefore it is evident that Houston has a future as a rice-milling center.

Rice Mill for Arkansas.

A modern rice-milling plant with a daily capacity of 250 barrels will be established at Stuttgart, Ark. It will include a four-story brick or frame mill 40x60 feet and a warehouse or elevator for storing 75,000 bushels of rice. Probably from \$25,000 to \$35,000 will be the cost of buildings and machinery. This enterprise is planned by the Stuttgart Rice Mill Co., which was incorporated last week with \$50,000 capital and the following officers: G. W. Fagan, president; H. C. Bruner, secretary; J. F. Whaley, treasurer, and Ray O. Burks, manager.

MINING

New Machinery Needed.

The unabated activity in the coal trade of Great Britain is necessitating large expenditures for new machinery and up-to-date equipment. The *Iron and Coal Trades Review* of London, in discussing this situation and pointing to the keen competition which requires alertness in sending to the scrapheap machinery not up to date, says:

"Developments in machinery are constantly being made, enabling work to be done better and cheaper than with the machinery of days gone by, and the firm that has machinery of the latest type is usually in a position to undersell its opponents, either in quality or price. In the case of coal mines the question is accentuated by the fact that various causes are increasing the cost of getting the mineral, and, therefore, necessitating improved and more economical methods of working, quite apart from the rivalry of progressive competitors. Coal pits are becoming deeper and deeper, the seams that are worked are thinner, and the distances over which mineral has to be hauled are becoming longer, all necessitating more economical appliances, while they also render larger outputs necessary, and with the larger outputs a further increase in the economies is obtainable by improved machinery. In addition to this, the various coal mine regulation acts, employers' liability acts, workmen's compensation acts, and the action of the trade-unions in keeping up the price of labor all tend to steadily but surely increase the cost of getting the mineral. In the face of these conditions, the far-sighted owner sees that there is only one thing to be done, and that is, to substitute improved appliances, enabling winding to be done more rapidly and more economically, haulage and coal-getting to be done more economically, and all the accessories of mining work that go to make up the sum total of mining costs to be reduced. Now is the time when colliery owners can afford to put their houses in order, when they are making money, and that not after a long period of no profits, but during a boom succeeding a comparatively recent boom."

Altoona Coal & Coke Co.

Active preparations are being made by the Altoona Coal & Coke Co., 15 Steiner Bank Building, for the development of about 400 acres of coal lands in Blount county, on the Louisville & Nashville Railroad. This company has recently organized, and advises the MANUFACTURERS' RECORD that it desires to purchase mining equipment, including cars, rails, mine machinery, etc. It expects to develop its property to a production of 500 tons of coal per day. Officers of the company are Messrs. T. F. Wood, president, and E. Bumford, secretary and treasurer.

Cement in 1906.

The following statement, issued by the United States Geological Survey, shows the approximate production of hydraulic cements in the United States for the calendar year 1906.

This statement is exact within a small fraction of 1 per cent., and is issued in advance of the annual report on the production of cement which is now being prepared in that bureau. The returns on which it is based are complete with the exception of those from four small plants.

The total production of all kinds of hydraulic cement in 1906, including Portland, natural-rock and Puzzolan cements, was 50,027,321 barrels, valued at \$54,015,713.

Of the above total amount of cement manufactured in the United States in

1906, 45,610,822 barrels were Portland cement, with a value of \$51,240,652; 3,935,275 barrels were natural-rock cement, with a value of \$2,362,140, and 481,224 barrels were Puzzolan cement, valued at \$412,921.

Prices were good in 1906, and showed an advance over those of 1905. The total production of cement in 1905 was \$40,894,308 barrels, valued at \$36,012,189. Comparison of totals for 1905 and 1906 shows an increase in 1906 of 9,133,013 in production and \$18,003,524 in value.

West Virginia Development.

Messrs. F. E. Wallace of Mabscott, P. M. Snyder of Mt. Hope, Price E. Lilly, Blue Jay; J. E. Cox, Stanaford, and Dr. W. W. Hume, J. E. Summerfield and A. A. Lilly of Beckley, all of West Virginia, have incorporated the Pemberton Colliery Co., with a capital stock of \$15,000, to develop about 1800 acres of coal lands on the Piney branch of the Chesapeake & Ohio Railroad, in Shady Springs district of Raleigh county, West Virginia.

Big Portland Cement Plant.

Representatives of Eastern capitalists who have recently been investigating conditions in the Middle West with a view to establishing a Portland cement plant have decided that St. Louis, Mo., has the advantages for manufacturing and the distributing facilities necessary for such an enterprise. They propose building a plant to have a daily capacity of 2500 barrels of cement, and about \$1,750,000 is to be invested. It is understood that the capitalists have arranged to locate the works on the lands of the Continental Brick Co., four miles west of Carondelet, where the Missouri Pacific and the Frisco and Rock Island railways meet. Plenty of limestone, clay and other raw material are said to be available. Mr. D. A. Marks is president of the Continental Brick Co., with offices in St. Louis, Mo.

A Territory Power Plant.

There seems to be no section of the country in which no activity is seen in the development of water-power for transmission by electricity to operate lighting and power plants and other industries. About one and one-half miles north of Tishomingo, I. T., active progress is being made with the construction of the power plant begun some time ago by P. T. Foley of Parsons, Kan., the work being about two-thirds completed. A dam is being built across the Pennington river, together with a power-house containing the necessary hydraulic and electrical machinery for generating 800 horse-power, and the water supply will furnish 2000 horse-power in the future. The dam is of the weir type, constructed of concrete. The Arnold Company of Chicago is the construction engineer in charge.

Another West Virginia Glass Plant.

West Virginia will soon have another glass plant. This new establishment will be located by the Tuna Glass Co. of Bradford, Pa. It will be located at Clarksburg, W. Va., about \$75,000 to be the cost of buildings and equipment, and the annual capacity to be 200,000 boxes of window glass. The buildings will include a 115x200-foot structure, another 75x125 feet, with wings 32x75 feet, 50x150 feet and 30x50 feet, an office building and several small buildings. The architect or engineer in charge has not been selected. Mr. C. H. Harding is general manager of the company.

The Commercial Club of Fayetteville, Ark., has elected Messrs. J. M. Williams, president; G. W. Rattenbury, vice-president; E. R. Wilson, secretary, and A. L. Trent, treasurer.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Buy Timber and Mill.

The Stetson Lumber Co., American National Bank Building, Macon, Ga., advises the MANUFACTURERS' RECORD that it has purchased the entire plant, including saw and planing mills, of the Arlington Lumber Co. at Arlington, Ga. It has also purchased about 10,000 acres of first-class long-leaf yellow-pine timber lands at an approximate price of \$200,000, and will make a specialty of rift flooring at its Arlington mill. This plant has a capacity of from 40,000 to 50,000 feet of lumber per day. In addition to the production of this plant, the Stetson Lumber Co. manufactures and sells long-leaf yellow-pine car sills and bridge material, flooring, ceiling, siding, lath, shingles and factory schedules. Its officers are Messrs. J. P. Stetson, president, and J. M. Mathews, secretary and treasurer.

A dispatch from Hattiesburg, Miss., states that special announcement has been made that the Interstate Lumber Co., recently organized with a capital stock of \$100,000, has purchased the mills, timber and railroad properties of the D. C. Bacon Lumber Co. near Shipman, Miss. The transaction is said to involve nearly 20,000 acres of timber land, with a modern sawmill plant having a capacity of about 25,000,000 feet of lumber annually. The purchase price is thought to be approximately \$500,000. Mr. W. G. Day is the president of the Interstate Lumber Co., and its directors include Messrs. H. C. Brownell, C. R. Brownell and H. C. Day.

Retail Lumber Dealers.

The eleventh annual convention of the Retail Lumber Dealers' Association of Mississippi and Louisiana was held at Jackson, Miss., on the 12th and 13th inst. President B. A. Tucker of Senatobia, Miss., called the convention to order, after which Hon. H. M. Quinn delivered an address of welcome. Governor James K. Vardaman of Mississippi addressed the association, stating, among other things, that co-operation is one of the agencies of advanced and advancing civilization, the principle that brings men, whose interests are common, together in order to get better results for the general welfare. Other speakers included Secretary Wailies of the Tri-State organization of Birmingham, Ala.; ex-President Randolph of Birmingham and President Tucker. Papers were read by L. B. Sedgwick of McComb City, Miss., on reciprocal demurrage, and by Edward Schwartz of New Orleans, La., on ready roofing.

Meeting of Lumbermen.

The second annual meeting of the Alabama Lumber Manufacturers' Association was held last week at the New Exchange Hotel, Montgomery, Ala. The association considered market conditions for lumber, the supply of cars and the general condition of the trade. The following officers were elected for the ensuing year: President, James C. Williams of Eleanor, Fla.; vice-presidents, Mark Miller of Foley, Frank Stollenwerck of Dunham, H. Lathrop of Birmingham, W. S. Hollister of Montgomery and W. C. Rumley of Belamy; secretary and treasurer, J. H. Eddy of Birmingham.

Mahogany to New Orleans.

A cargo of mahogany has been received at New Orleans from the west coast of Africa. It arrived on the British steamer Osceola and was consigned to the C. C. Mengel & Brother Company of Louisville, Ky. This firm, it is said, intends to make

New Orleans the port of entry for direct importation of mahogany, and the shipment referred to marks the commencement of a regular service between Axim, on the west coast of Africa, and New Orleans. The cargo consists of 200 cars, approximately 3000 logs, and is valued at \$250,000. It will be transported from New Orleans to Louisville over the Illinois Central Railroad. The C. C. Mengel & Brother Company, it is understood, has secured concessions on the west coast of Africa, and contemplates making shipments to New Orleans every three months.

Rebuilding Cypress Mill.

Advices from New Orleans, La., announce that satisfactory progress is being made on the reconstruction of the cypress plant of the Ruddock-Orleans Cypress Co., which was destroyed by fire some time ago. The buildings are in course of erection, and preliminary arrangements are being made for the installation of machinery. The plant will have a capacity of from 12,000,000 to 15,000,000 feet of cypress lumber annually, and is expected to be ready for operation by July 1. It is stated that the Ruddock-Orleans Cypress Lumber Co. has recently increased its holdings of cypress timber lands by extensive purchases. Officers of the company are Messrs. C. H. Ruddock, president; T. H. McCarthy, vice-president; G. W. Dubea, treasurer; C. R. Turrie, secretary, and E. V. Preston, general manager.

Lumber for Panama.

One of the largest calls for lumber by the Isthmian Canal Commission, main office, Washington, D. C., is an announcement that it will be in the market for 4,000,000 feet for use at Panama. The specifications require long-leaf yellow pine, cut in lengths divisible by two, no odd lengths to be considered. Among the measurements asked for are the following: 100,000 feet of 4x4, grade s&s; 500,000 feet of 2x4 and 500,000 feet of 2x6 of the same grade. Of the grade s&s, 500,000 of 2x8, 750,000 of 2x12 and 250,000 of 2x10 are wanted; also 50,000 2x14, s&s; 100,000 2x3 rough; 50,000 1x6-1x8-1x10, s&s; 500,000 6-inch drop sidings, s&s; 500,000 6-inch flooring and 100,000 of 4-inch flooring.

For a Forest Association.

A movement has been started for the organization of the Georgia Forest Association, with offices at Athens, Ga. A temporary organization has been effected with Prof. Alfred Akerman of the department of forestry of the University of Georgia secretary and treasurer, and application will be made for a State charter. It is understood that as soon as practicable the publication of a magazine to be devoted to the advancement of science and practice of forestry will be started. This will be sent to members of the association without charge. Professor Ackerman, it is stated, will receive applications for membership in the association.

Big Shingle Shipment.

A report from Fort Worth, Texas, states that the latest commercial exploit is a shipment of 15,000,000 shingles from the Northwest to the Burton-Lingo Company of Fort Worth. The shipment consists of 56,000 bundles, and the purchase was consigned by way of San Francisco at an extra freight charge of \$1.20 per thousand, owing to the glutted condition of the Northern railway lines. It will go by rail from San Francisco to Fort Worth.

Manufacturing Locust Pins.

The Mountain Locust Pine & Bracket Co. of Morgantown, W. Va., advises the MANUFACTURERS' RECORD that it has re-

organized and is manufacturing locust pins from split billets, from the genuine mountain yellow locust. The plant is capable of producing 5000 pins per day, and is running at its full capacity. Officers of the company are Messrs. Ernest G. Atkinson, president, Pittsburg, Pa.; C. William Cramer, Morgantown, W. Va., vice-president and general counsel; M. I. Littleton, Morgantown, secretary-treasurer, and A. K. Jenkins, Point Marion, Pa., general superintendent.

Two Mills for Memphis.

Messrs. W. C. Calhoun of Sheboygan, Wis., and C. W. Talge of Evansville, Ill., are reported to have purchased 12 acres of ground in Northeast Memphis, Tenn., for the purpose of erecting two lumber mills to have a combined capacity of 25,000 feet per day. The site for the proposed plants is at the junction of May avenue and the Belt Line, and was sold by the Union Land Co. The Industrial League of Memphis is said to have been instrumental in having the purchasers favorably consider this site as the location of their mills.

Southwestern Lumbermen.

The Southwestern Lumbermen's Association, composed of lumbermen from Arizona, New Mexico and West Texas, held its annual convention at the Orndorff Hotel, El Paso, Texas, last week. Matters of routine business were considered and the following officers elected for the ensuing year: President, I. A. Shedd, El Paso; vice-president, Benjamin Titus, Lordsburg, New Mexico; secretary-treasurer, J. W. Overholzer, El Paso.

Oklahoma Retail Dealers.

The Oklahoma Retail Lumber Dealers' Association concluded a two-day session at Oklahoma City, O. T., last week and elected the following officers: F. J. Gentry, Pond Creek, president; F. B. Hogg, Shawnee, vice-president; G. D. Rohr, Kaw City, treasurer.

New Orleans Exporters.

At its annual meeting last week the New Orleans Lumber Exporters' Association elected the following officers: J. H. Hinton, president; W. A. Powell, vice-president; L. Haymann, treasurer; J. O. Elmer, secretary and traffic manager.

Dressed Yellow Pine Lumber.

The American Machine Co. of Louisville, Ky., is desirous of corresponding with manufacturers of dressed yellow-pine lumber (about three inches thick in long lengths) relative to making contracts for purchases.

Lumber Notes.

The next monthly meeting of the Alabama Lumber Manufacturers' Association will be held at Montgomery, Ala., the second week in April.

The British steamer Kierriemoor cleared from Pensacola, Fla., last week with a cargo of 1,475,424 superficial feet of sawn timber for Amsterdam and 918,648 feet for Hurlingen. The Norwegian bark Heimdahl cleared from the same port with more than 1,000,000 feet of lumber for Rio Janeiro.

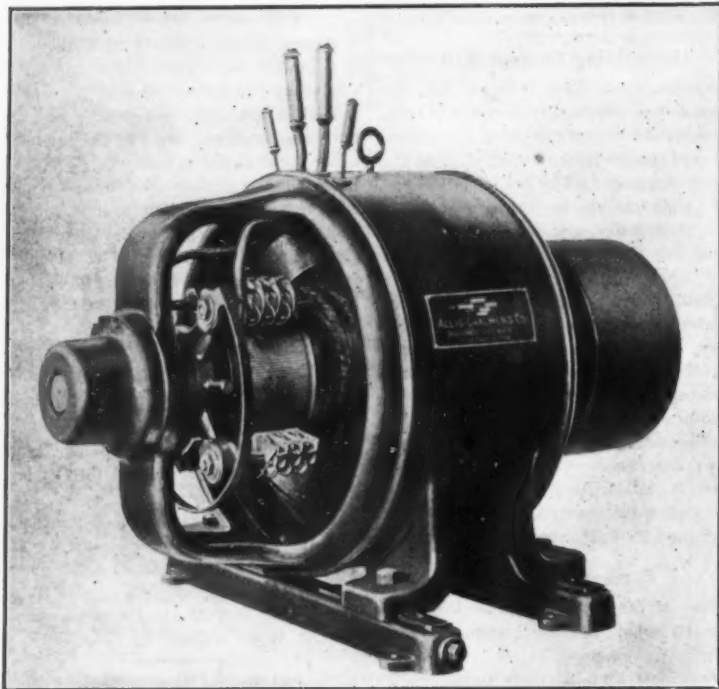
At an adjourned meeting of the South Mississippi Lumbermen's Association, held at Hattiesburg, Miss., on the 15th inst., E. A. Walker was elected permanent secretary; T. L. O'Donnell, first vice-president, and Mr. Parks, second vice-president. Messrs. W. C. Rodgers, T. L. O'Donnell and E. A. Walker were appointed a committee to prepare a constitution and by-laws. President J. F. Wilder will call another meeting of the association when this committee shall be ready to report.

MECHANICAL

Allis-Chalmers Type "K" Motors.

The growing demand for direct-current electric motors that can be applied to the individual drive of machinery has led to important changes in mechanical and electrical design of motors heretofore used. To meet the requirements of this service the construction should not only be compact, but also permit of mounting the

pole cores are of open-hearth steel and circular in cross-section; these cores are machined on one end to fit the inner surface of the cylindrical yoke and on the other to receive the pole shoes. The latter are built up of annealed steel punchings riveted together and fastened to poles by flat-head machine screws; pole face carefully shaped to give suitable distribution of field flux, thus securing good commutation and preventing humming due to



ALLIS-CHALMERS TYPE "K" MOTOR.

motor in any position, while the windings and commutator must be either partially or wholly protected from external injury. Geared and direct-coupled methods of driving are displacing belts, and this, together with the fact that sudden and excessive overloads are of common occurrence, requires larger bearings and shafts of greater stiffness than were formerly used on motors of the same class. The demand for a wide variation in speed by shunt field control, with occasional heavy overloads at any speed, has also called for material improvement in commutating qualities.

The Allis-Chalmers Company of Milwaukee, Wis., announces a new line of direct-current motors, designated as Type "K," especially designed to meet these mechanical and electrical requirements. Its new machines are equally well adapted to belt drive at constant speed and continuous service, or geared drive, variable speed and intermittent service.

Their external appearance is similar to the well-known Allis-Chalmers types "N" and "B" motors, but the construction differs in many important details; in fact, represents a new design. The changes, both mechanical and electrical, are the result of years' experience in the construction of motors for industrial purposes. The machine is very compact, the construction is rigid and every detail has been worked out with especial reference to the most exacting requirements of modern service. It is illustrated herewith.

The cylindrical field magnet yoke is of open-hearth steel and machined on each end to receive housings that carry bearings; housings held in place by through bolts, and on four-pole machines can be rotated 90 or 180 degrees to allow side-wall or ceiling mounting; bi-polar machines can be arranged for floor or ceiling mounting; yoke is machined on inside cylinder surface and poles are fastened to it by countersunk fillister-head cap screws;

armature teeth; field cores are wound on metal spools, except for smaller sizes, and are covered with sufficient insulation coated with varnish to protect from external injury or moisture.

The armature cores are built up of sheet-steel punchings insulated from each other to reduce core loss and consequent heating; laminations are keyed to shaft, and in building up core they are separated at intervals so as to form radial ventilating ducts; punchings are firmly clamped between cast-iron end heads, which also serve as supports for ends of armature coils; in punching armature laminations openings are made in the discs, so that when the latter are assembled ventilating passages are formed parallel to shaft and connecting with radial ducts. There is thus a free passage for circulation of air through core, and all parts of core and windings are thoroughly ventilated.

The armature coils are form-wound and interchangeable; they are heavily insulated with stay binding, and the whole armature is thoroughly impregnated with insulating varnish after it has been completely wound.

The commutator is of large diameter and ample wearing depth, having bars of hard-drawn copper insulated from each other and from shell by best quality of mica; mica between bars is selected so as to give even wear; clamping rings hold bars firmly, and the whole construction is such as to secure a perfect cylindrical surface free from high or low bars.

The commutator sleeve, in all except the smaller sizes, is cored, to permit the passage of air through to the armature; shaft is made of high-carbon steel, which is very stiff and can stand heavy overloads without vibration or bending; bearings are amply large, and lubricated by oil rings which rest on the shaft and dip into oil wells beneath. The shaft projection for the pulley is turned smaller than the journals, so that the journal can be turned

down, when worn, without reducing its diameter below that of the projection.

The brushholders are of the reaction type, same general design as used on all Allis-Chalmers standard direct-current machines. They are simple in construction, positive in action, allowing brush to follow surface of commutator freely. The brushes are held firmly to the holders, and while they can be readily removed for inspection, it is not possible for them to get out of place while in service. The brush studs are fastened to a rocker-arm mounted on bearing housing; this allows brushes to be set at best running position, but after being once properly set they require no adjustment under any change in load within range of motor. The brushes are graphite, and are connected to holders by flexible copper shunts so that current is not compelled to pass through any sliding contacts; ample carrying capacity is provided in brushes and brushholders, and all parts operate at low temperature.

The standard Type "K" motor is made open at ends to permit a free circulation of air through the machine. It can, however, be made semi-enclosed or totally enclosed by addition of suitable metal enclosing covers, which are readily fitted to end housings. For the semi-enclosed type the covers are perforated, forming a screen cover, which, while allowing a circulation of air, protects the motor from flying particles. This type of motor can be used on work where an open motor would not answer, but where an entirely enclosed one is unnecessary.

In the use of variable-speed motors for the individual drive of machine tools there are two points to be carefully considered:

(1) The size and weight of the motor is dependent to a great extent on the minimum speed at which the motor is required to develop its full rated power. The slower the minimum speed the greater will be the size and weight for a given horse-power output.

(2) The maximum speed of the motor is dependent on the peripheral speed of the armature, commutator, pinion or belt, or upon the ratio of speed reduction between the driven shaft and the motor shaft. This limits the maximum speed to 1000 to 1600 R. P. M., depending on

These motors are manufactured in 13 different frame sizes, and for each size there are a number of ratings, the output of a given frame being proportional to the speed.

Type "K" motors are suitable for all classes of work where either a constant or variable-speed direct-current motor is required. For general driving of machinery or for variable-speed work shunt-wound machines are used. For cases where a large starting torque, combined with the constant-speed characteristic of the shunt motor, is required, compound-wound motors can be furnished. For crane and hoisting service series-wound motors are supplied.

Type "K" machines operate exceptionally well as generators which are compound wound, and will deliver any current from zero to their full rated output without sparking and without shifting the brushes.

Type "K" machines are given the same high-grade finish that characterizes all Allis-Chalmers electrical apparatus. All castings are filled and rubbed down to a smooth surface. The workmanship is first-class throughout, and all motors are thoroughly tested before being shipped.

Ogle Patent Octagon Screen.

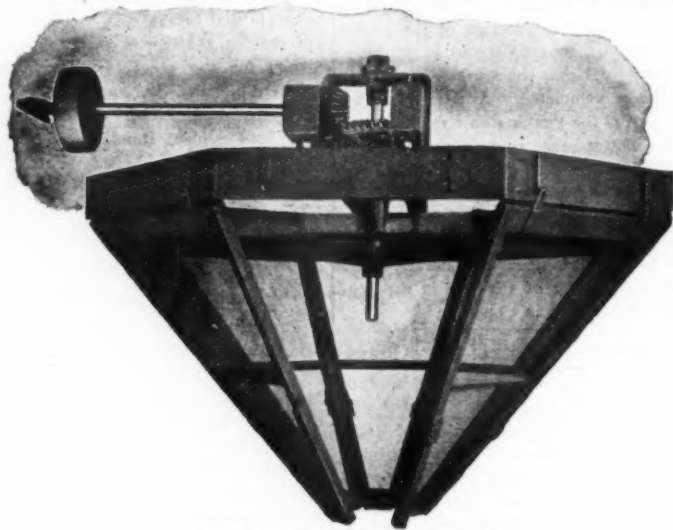
The managers of plants wherein it is necessary to screen dry materials should note the details of the Ogle patent octagon screen, which is illustrated herewith. The makers of this screen describe it as follows:

An unequaled screen. Its capacity is wonderful. Requires less attention than any other screen. No vibration. Nothing to get out of order. Runs very light. Driven with a four-inch belt; 85 square feet of screening surface.

The screen proper is in eight sectional trays hung to top frame by iron straps and hooks, and can be interchanged in a very short time while screen is in motion.

Trays are fastened at bottom near outlet by clamp straps so arranged they can be removed and trays unhooked from frame.

Disk is a circular steel plate fastened to cast-iron spider attached to shaft. In its velocity and centrifugal motion the material falling on disk from four differ-



OGLE PATENT OCTAGON SCREEN.

the output of the motor. The maximum speed being thus fixed by mechanical limitations, any increase in the range of speed variation must be obtained by decreasing the minimum speed, and, consequently, increasing the size of motor for a given output, or decreasing the output for a given size. These mechanical limitations make it desirable to keep the speed range down to a reasonable amount, and it has, therefore, in Type "K" motors been limited to a ratio of 1:3.

ent spouts is distributed equally over surface of screen, separating the fine material from the coarse. In order to get a great capacity the disk must be kept full of material.

Wire cloth used on this screen is of a coarser mesh, owing to angle screen is hung, therefore produces a greater quantity of finished goods and will wear longer than finer wire.

Elevator feeding this screen should not have less than 12x7-inch buckets every 16

inches at a speed of not less than 35 to 45 revolutions per minute.

This screen is of a simple and complete type. Made strong and durable. Octagon, conical shape, with rotary disk, as shown in cut. Capacity—Acid phosphate, dry, 30 tons per hour; abattoir tankage, dry, 15 tons per hour; sand, dry, 15 tons per hour; ground phosphate rock, dry, 5 tons per hour; cinder and quartz, dry, 6 tons per hour; and cement rock, 5 tons per hour. Speed—Disk shaft, 35 revolutions, and velocity of disk, 750 feet per minute.

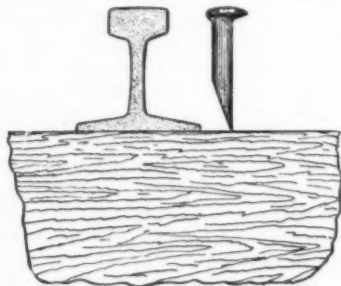


PLATE 1.

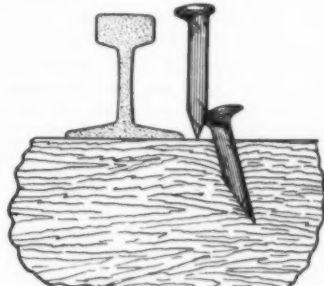


PLATE 2.

SPIKE STRUT FOR TRACK WORK.

Size—Diameter, 8 feet, and length of trays, 5 feet 6 inches.

Messrs. Walker & Elliott, Wilmington, Del., build the Ogle screen.

Spike Strut for Track Work.

Construction engineers, managers of steam and electric railways and others interested in track construction will find their attention attracted to accompanying views of a spike strut for track work. This strut is a new device being introduced by the Maryland Railway Supply Co., 510

water or sand from getting under the rail. There is no friction, and it performs the same function as either the tieplate or rail brace, as has been demonstrated by comparative tests already made. It also prevents the cutting of the throat of the track spike. It is particularly adaptable to curves or any point where greater resistance is required, such as rail joints, frogs and switches. On railroads using double spikes on each tie the spike strut will prove many times more stable, and the promptness with which they can be driven recom-

mends a supply being placed in every section-house. The cost of these spike struts is about one-fourth that of the tieplate or rail brace, which makes a very perceptible reduction in the cost of track maintenance.

Lubrication of Transmission Rope.

[Written for the Manufacturers' Record.]

With the marked increase in number of rope-drive installations throughout this country and Canada the subject of rope lubrication comes more prominently before the engineering public as its influence

For large transmissions, particularly to long distances, cotton rope is not to be compared with manila, because for equal diameters it has only four-sevenths of the strength of manila, because it is not at all impervious to moisture and the weather, being subject to rot if kept wet for any length of time; cannot be satisfactorily spliced; stretches more than manila; causes a greater loss of power in pulling the ungreated rope out of the grooves, and, finally, because for equal powers it is decidedly more expensive in first cost and in maintenance.

Transmission rope made from manila hemp is particularly subject to internal wear unless scientifically lubricated with the best kinds of material. Weight for weight, these ropes are as strong as steel in the direction of their length, but have little transverse strength, owing to their cellular structure. When the stems are subdivided by machinery the fibers are made peculiarly rough and splintery. When these rough surfaces are bent around a sheave they slide on each other with much force, every part of the rope section rubbing upon its surrounding fibers. This may happen many times in one minute, according to the distance between shafts. It is absolutely destructive to the rope life, the fiber being wholly ground to powder. Apart from the abrasion by interfiber friction, there is a destructive action by constant flexure of the fibers of the cell ends, just as a wire is broken by frequent bending at one point.

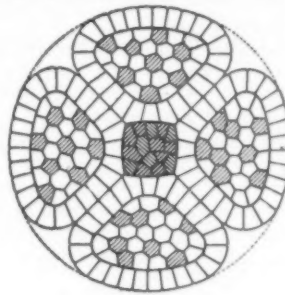


Fig. 12
M. American Transmission Rope Showing Lubricated and Cover Yarns

LUBRICATION OF TRANSMISSION ROPE.

If the strands of a worn-out rope are untwisted a quantity of fine powder will be found in the interspaces between the yarns produced from the total destruction of fibers by their internal movements with respect to each other. No rope can long endure this destructive abrasion without lubrication. The degree of skill with which the lubricant is applied and its character determine to a great extent the rope's durability. Well-lubricated rope outlasts at least four lengths of the same diameter rope laid up dry.

External dressings do not soak into the places where the real friction takes place, so that their effect is merely local, leaving the interior dry. Soaking the strands in tallow before laying up gives imperfect protection. Tallow has not "body" enough to cling to the fibers. It works out or dries out. The free fatty acids contained in tallow attack the fibers, and if it becomes rancid it causes the rope to rot.

"American" transmission rope is lubricated by thoroughly soaking the core as well as a number of inner yarns of each strand in a bath composed mainly of the finest flake graphite attainable, mixed with fish oils of a neutral character. The accompanying cut shows a cross-section of a four-strand "American" rope, the shaded portions indicating the graphite-lubricated core, or heart, and yarns of each strand. Special machinery has been worked out for applying this bath to the parts selected for treatment without interfering with the process of twisting and laying up. Flake graphite is precisely the

same material which has established its reputation among engineers for the lubrication of engine cylinders and bearings. It is not to be confounded with "plumbago" or "black lead," an amorphous, gritty, impure graphite frequently containing considerable clay and lacking the lubricating value of flake graphite. The lubricating compound here permeates all the fibers of the completed rope, lodging in the hollows, smoothing out the uneven places and forming layers of unguent between all fiber and yarn surfaces. This constitutes perfect lubrication. After a short period of service enough of this mixture is soaked into the external fibers to form by action of the running sheaves a glossy black metallic coating on the outside of the rope, which is absolutely impervious to water. In paper and pulp mills such ropes have run for years under conditions which should cause them to be thoroughly reached. Ropes thus lubricated require no dressing or any attention as to maintenance. If not absolutely abused, they will last 10 years, and even longer. Prof. John J. Flather reported some years ago that John Musgrave & Sons had some ropes in use in their works at Bolton, England, which were in good order after running 17 years, so that they were made at a time when modern highly-improved methods of scientific rope laying and lubricating had not been developed.

Louisiana Canal Proposition.

It is stated that H. G. Chalkley, Lake Charles, La., of the North American Land & Timber Co. of London, England, announces that as soon as the work can be successfully completed, which will be probably by next fall, the Mermentau and the Calcasieu rivers will be connected by an inland waterway without waiting for the Government's action. His company intends to construct a canal from Sweet Lake east to Lake Misere, a distance of 10 miles. Work will be begun upon this improvement as soon as the dredges finish their labors at the mouth of the Sweet Lake Canal. The distance between the two rivers is about 25 miles along the survey of the inland waterways canal.

The North American Land & Timber Co. already owns the canal from Calcasieu lake east six miles to Sweet lake, which is navigable for tugs and barges throughout its entire length and furnishes ingress now to a newly-settled country on the banks of Sweet lake. A canal of the same dimensions, 20 feet wide and 6 feet deep, will be dredged by them directly east to Lake Misere. From Lake Misere easy access to the Mermentau can be gained through Bayou Misere and Bayou Lacasine, both of which are navigable.

While the primary object of the canal is drainage, the company desiring to redeem a large area of semi-swamp land and put it in shape for pasture land, the canal will incidentally furnish transportation facilities. When it is used for this purpose the company's idea is to charge a small toll, merely sufficient to provide funds for keeping it in repair. The North American Land & Timber Co. canals follow the Government survey closely, but somewhat to the north. The intention of the company to drain these lands, at present useless, and make them capable of use, is only another indication of the wise and liberal policy which the company has adopted toward its vast Louisiana possessions.

The Commercial Club of Ashland, Ky., has recently been reorganized with Messrs. T. A. Field, president; Thomas Bogges, Jr., vice-president; J. G. Crabbe, secretary-treasurer, and E. W. Strack, J. Leicht, P. K. Mallin, L. F. Zerfoss, J. S. Ogden, M. W. Thomas, J. M. King and F. R. Henderson, directors.

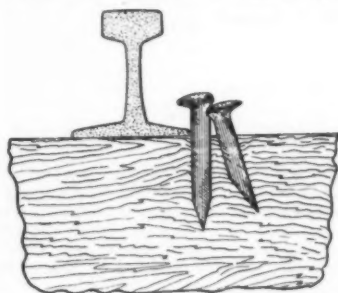


PLATE 3.

SPIKE STRUT FOR TRACK WORK.

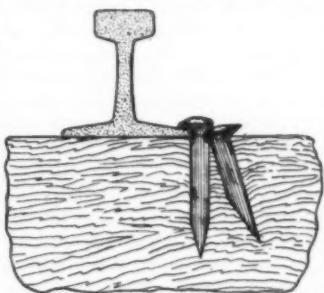


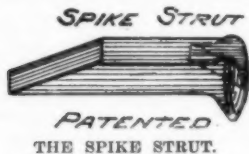
PLATE 4.

Continental Building, Baltimore, Md. It is described by the company as follows:

The track should be properly set to gauge before placing the spike strut.

The spike strut is started about the width of a spike from the base of the rail (see Fig. 1) and driven straight until the head is within an inch of the tie (as in Fig. 2). The bevel will cause the spike strut to take proper angle.

The track spike is inserted through recess in the spike strut (see Fig. 2) and driven in the ordinary manner until the



on the durability and working of the "flying transmission of power" is becoming better understood.

Power transmission fiber rope is practically all made of cotton or manila hemp, though rawhide, leather, hemp and flax rope drives are occasionally found. Of course, iron and steel wire ropes are very extensively used for special purposes of transmission over very long distances, but they have no general application, and form a class apart.

Cotton has special advantages for very small drives between closely-spaced shafts, as in distributing power to a large number of spindles, or pickers, or where large sheaves are objectionable, as in case of limited headroom. It is softer and more pliant than manila, so that it will stand bending around small sheaves. Cotton has a small amount of lubrication from the solidified oleaginous matter distributed on the internal surface of fiber and deposited during growth. It also contains a certain amount of moisture. Cotton rope is not lubricated internally, as its natural suppleness and smooth component surfaces prevent brittleness and destruction by internal abrasion. An external dressing is applied to prevent the rope's fraying and "fluffing" by the fiber rising, as well as to protect it from weather and to retain the natural moisture.

two heads come in contact (as in Fig. 3).

The two spikes are then driven down together until the track spike firmly overlaps the base of rail (see Fig. 4).

The spike strut, both theoretically and practically, braces the rail at the point of greatest pressure. It holds the track absolutely to gauge for double the time of any device ever placed on the market. It has the additional advantage of being practically impossible to loosen, this furnishing a lateral stiffness, which prevents

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

NEW ORLEANS TERMINALS.

Leading Railroad Men Confer—Banquet to President Finley of the Southern.

The visit of President W. W. Finley of the Southern Railway Co. to New Orleans has been followed by the announcement that a passenger station to cost not less than \$175,000, but probably \$200,000, will be erected at the Basin-street terminal in that city. The question of erecting a large union depot has been deferred, but it is stated that the station to be erected will be so planned that it may be made part of the proposed larger structure when erection of that is desired. The proposed station will be used by only the Southern Railway and the Frisco system; hence the need for a larger building does not appear, although it is expected that in the future other companies at New Orleans will agree to enter the proposed union station, and when they do so it will have to be erected.

Mr. R. B. Fowler has been elected general manager of the New Orleans Terminal Co., which is controlled by the Southern Railway and Frisco interests. He has been superintendent, but since the resignation of Mr. L. S. Berg Mr. C. C. Harvey of the New Orleans & Northeastern Railway has been president and general manager of the terminal. Hereafter Mr. Harvey will retain only the office of president.

While plans for the contemplated improvements at the Chalmette terminals were considered at an official conference which President Finley attended, it is stated that final action upon them has been postponed until another meeting of the terminal company. These plans provide for a large grain elevator with electrical equipment, a warehouse and other construction. President Davidson of the Frisco system was also present, besides Mr. Harvey of the New Orleans & Northwestern and the terminal company, and Vice-President Russell of the Mobile & Ohio. After the conference Mr. Finley was reported as saying that there was nothing developed which would tend to deter the owners of the terminal company from proceeding with development along the most liberal lines. The plans for developing the terminals will be carried out. President Davidson said that the Frisco would be running trains into New Orleans by June 1.

A banquet was tendered to President Finley during his visit to New Orleans, and this function was attended by about 150 business and professional men. Other prominent railroad men present were A. J. Davidson, president of the Frisco system; E. L. Russell, vice-president of the Mobile & Ohio; H. B. Spencer, vice-president of the Southern Railway; C. C. Harvey, president of the New Orleans Northeastern; T. C. Powell, vice-president of the Louisville lines of the Southern; J. S. B. Thompson and others.

President Finley in his speech spoke particularly upon the development of trade with Central and South America through the Gulf ports, and particularly through New Orleans. He said that the interests of the city required the greatest possible development of railway facilities which could be provided only by prosperous roads; this called for harmonious co-operation between the railways and the people for mutual benefit. To provide these additional facilities the resources of the railways in the South would be taxed to the utmost. But their provision at the earliest possible date was of incalculably more importance to the South than any possible rate reduction or any proposition to im-

pose penalties upon roads for failure to perform services beyond their present capacity. Therefore, as credit depends upon income, any forced reduction of rates or the imposition of penalties would result in reducing income and inevitably prevent or greatly delay improvements requiring the expenditure of millions of dollars which can be obtained only if the finances of the road are such as to give confidence to investors and if the attitude of the Southern people toward railways is such as to show that unreasonable restrictions are not to be feared. In conclusion, he says that he shared the fate of those who believed that at no distant day much more harmonious relations between the railways and the people served by them would prevail.

New Equipment.

The Norfolk & Western Railway has ordered from the Western Steel Car & Foundry Co. of Hegewisch, Ill., 1000 40-ton hopper cars and from the Roanoke (Va.) Machine Shops 243 40-ton flat cars. This latter order is in addition to 1500 coal cars and 25 cabin cars previously ordered from the Roanoke shops.

The Blue Ridge Railroad has received two 80-ton freight engines from the Richmond plant of the American Locomotive Co.

The Pennsylvania Railroad is to build 20 passenger locomotives at its Juniata shops.

The Texas & Pacific Railway will, it is reported, shortly purchase some new passenger cars.

The Kansas City, Mexico & Orient Railway has ordered from the American Car & Foundry Co. 400 box cars and 200 stock cars of 60,000 pounds capacity.

The Seaboard Air Line has ordered from the Rodger Ballast Car Co. 50 Hart convertible cars of 80,000 pounds capacity. The Seaboard is also reported to have ordered 1000 gondola cars of 80,000 pounds capacity from the Western Steel Car & Foundry Co.

The American Locomotive Co. is building three locomotives for the Fort Smith & Western Railroad.

The Terminal Railway Association of St. Louis is reported to have ordered 10 switching locomotives from the Baldwin Works.

The Brinson Railway has building at the Baldwin Works seven 10-wheel locomotives, four of them with 56-inch drivers and three with 68-inch drivers.

Western Maryland's New President.

Mr. B. F. Bush has been elected president of the Western Maryland Railroad Co. to succeed Mr. Winslow S. Pierce. He has also been elected president of the Davis Coal & Coke Co. to succeed Mr. Fairfax S. Landstreet. Mr. Bush has been agent of the fuel department of the Missouri Pacific Railway, another Gould property. He is 45 years of age, and has been in the railroad business since 1882, when he started as a rodman with the Northern Pacific Railroad, rising to the position of chief engineer of the Oregon Improvement Co. after being division engineer with the Northern Pacific and Union Pacific. He has also been president of the Western Mining & Coal Co. of St. Louis, which has control of the mining property of the Missouri Pacific.

The resignation of Messrs. Pierce and Landstreet from their official positions with the Western Maryland interests caused many inquiries, but they referred to statements made when they assumed office that they would be held only until such time as the company found a suitable president to permanently take charge of its affairs. Mr. Landstreet was also vice-president of the Western Maryland, which position he likewise resigned, and

a successor is to be elected. Both Mr. Landstreet and Mr. Pierce continue as directors in the railroad company.

Trinity & Brazos Valley Changes.

Col. Michael Sweeney, according to a report from Fort Worth, Texas, has resigned as vice-president and general manager of the Trinity & Brazos Valley Railway for the purpose of engaging in the coal trade as vice-president of the Maplewood Colliery Co. and the Maplewood Coal Co. of Chicago, which have mines in the southern part of Illinois. He will, it is stated, supervise the sales department of the companies. The report further states that Mr. W. E. Green, first vice-president and general superintendent of the St. Louis Southwestern Railway at Tyler, Texas, will succeed Mr. Sweeney as vice-president and general manager of the Trinity & Brazos Valley road.

It is also reported that the Trinity & Brazos Valley Railway, the Fort Worth & Denver City Railway, the Beaumont, Sour Lake & Western Railway, the Houston Belt & Terminal Co. and the Galveston Terminal Co. will be combined. In all of these lines Mr. B. F. Yoakum is interested, but there is no official confirmation of the report. It has also been reported that the St. Louis, Brownsville & Mexico Railway would be merged with the others. Mr. Yoakum is also interested in it, but doubt has been expressed that it would enter the combine.

The Texas State Railroad.

Mr. A. M. Barton, secretary of the penitentiary board of the State of Texas, writes the MANUFACTURERS' RECORD concerning the proposed extensions of the Texas State Railroad, which are to be built under the penitentiary system of the State, together with a sawmill plant. He says there is pending now before the Legislature a bill authorizing the penitentiary board to construct and extend the railroad, which, when completed, will connect with the International & Great Northern on the west and with the Texas & New Orleans on the east and cover a distance of about 26 miles. This railroad will also intersect the Cotton Belt Railroad at Rusk, about eight miles from the Texas & New Orleans. The bill now pending before the Legislature, it is said, meets with approval, and will likely become a law. The plans for the erection of the sawmill plant have not yet been purchased.

No Change in the Tidewater.

An official letter from the Tidewater Railway Co. to the MANUFACTURERS' RECORD says concerning the recent incorporation of the Virginian Railway Co., that it is nothing more or less than the consolidation of the Tidewater and Deepwater railways and that no changes of any kind will be made in the original plans and purposes. The same general officers will hold under the new incorporation.

Fish With Missouri Pacific.

Mr. Stuyvesant Fish, until recently president of the Illinois Central Railroad, has become a director of the Missouri Pacific Railway. According to reports from New York, President George J. Gould desired that Mr. Fish would join the board in order to give it benefit of his advice and abilities as a railroad manager. It is said that the general policy of the company will continue about as heretofore.

Railroad Notes.

W. M. Brittain of the South & Western Railway at Bristol, Tenn., has, it is reported, been appointed vice-president and general manager of the Tavares & Gulf Railway at Clermont, Fla.

President Frank S. Gannon of the Norfolk & Southern Railway Co. announces that on March 25 the Raleigh branch, between Raleigh and Zebulon, N. C., 24 miles, will be opened for business.

A report from Tampa, Fla., says that President W. A. Garrett of the Seaboard Air Line has assured the Board of Trade that the railroad company's extensive plans for improvements and enlargements at Tampa will be carried out vigorously.

The plant of the Wason Manufacturing Co. at Springfield, Mass., a well-known car factory, has been purchased, according to a dispatch from Springfield, by the J. G. Brill Company of Philadelphia. It is further stated that while the deal has not actually been closed, it will doubtless be completed.

Construction has begun at Norfolk, Va., on the first of the great piers of the Tidewater Railway Co. These piers will be at Sewalls Point, and the contractors are Sanford & Brooks of Baltimore. Some of the work is also let to the P. Sanford Ross Co. of Jersey City, N. J., and the McLean Construction Co. of Baltimore.

The Chesapeake Steamship Co. announces that the daily service of the York River Line between Baltimore, Md., and West Point and Richmond, Va., will be resumed on Monday, April 1. This service is every day excepting Sunday. E. J. Chism is general freight and passenger agent and T. H. McDannel is assistant general passenger agent.

Mr. G. F. Hawks, according to a report from Houston, Texas, has resigned his position as general superintendent of the Houston & Texas Central Railroad and other lines of the Southern Pacific system there, to accept a position with the El Paso & Southwestern Railway—probably that of general manager—with headquarters at El Paso, Texas. He will go to El Paso on April 1.

FOREIGN LETTERS

The MANUFACTURERS' RECORD is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. Some of these letters indicate the disposition of foreigners to buy American goods, and are therefore of interest to our readers.

American Products for Servia.

Donan Bank, No. 3 Technische Abtheilung, Belgrade, Servia:

"We should like very much to correspond with American firms manufacturing products likely to be salable in Servia. We are interested in agricultural machinery, mineral oils, machine oils, iron hardware, firearms of all kinds and new inventions in general. Direct communication with manufacturers is desired, and we urge them to send us catalogues, price-lists and best discounts."

Cottonseed-Oil Companies.

The Frederick (O. T.) Cotton Oil & Manufacturing Co. has been incorporated with a capital stock of \$100,000 by Messrs. W. E. Weathers, A. Lair, W. S. Peters, T. F. Spurgeon and others. The Chickasha Cotton Oil Co. of Chickasha, I. T., and Norman, O. T., has incorporated with a capital stock of \$100,000. Incorporators are Messrs. R. K. Wooten of Chickasha, I. T.; E. B. Johnson and C. H. Bessant of Norman, O. T.; R. K. Wooten, Jr., of Oklahoma City, O. T., and others.

A statement of phosphate shipments through Savannah, Ga., for February, as compiled by Messrs. J. M. Lang & Co. of that city, shows that a total of 8144 tons was shipped. These shipments included three cargoes, two of which, aggregating 5643 tons, were shipped to Germany, and one cargo of 2501 tons to the Netherlands.

Construction Department

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY.

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY.

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY.

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

ALABAMA.

Anniston, Ala.—Foundry.—Union Foundry Co. incorporated with \$100,000 capital stock, with H. A. Salzer, LaCrosse, Wis., president; D. W. Kremers, vice-president, and J. G. Kremers, secretary-treasurer, to operate the plant of the Hercules Pipe & Foundry Co. A company was reported February 14 as being organized to improve and operate the soil-pipe plant of the Hercules Company, purchased by G. Schumacher of Milwaukee, Wis., and associates. Mr. Schumacher will probably superintend the operation of plant.

Bessemer, Ala.—Pipe Foundry.—U. S. Cast Iron Pipe & Foundry Co. is proceeding with proposed improvements at plant, which include an extension 300 feet long, 125 feet wide and 50 feet high to molding and casting departments and the installation of two electric traveling cranes covering an area 500x100 feet; New York office, 80 Broadway.

Birmingham, Ala.—Frog and Switch Plant. At a recent stockholders' meeting of the Kilby Frog & Switch Co. the increase of capital stock from \$80,000 to \$130,000 (previously mentioned) was authorized; also improvements to plant, doubling the present capacity. E. M. Kilby is general manager.

Birmingham, Ala.—Sewer-pipe Works.—Southern Sewer Pipe Co. is building large brick extension to plant and will increase output by 100 per cent. Additional kilns are being erected and orders have been given for all new machinery required. (Recently mentioned.)

Blount County, Ala.—Coal Mines.—Altoona Coal & Coke Co., reported incorporated February 23 at Birmingham, Ala., with \$28,000 capital stock, will develop 400 acres of coal lands in Blount county. It is contemplated when the property is fully developed to have a daily capacity of 500 tons. Mining equipment will be purchased. T. F. Wood is president, E. Bumford secretary-treasurer; main office, 15 Steiner Bank Building, Birmingham, Ala.

Chunchula, Ala.—Agricultural Company.—Chunchula Farms Co. incorporated with

\$25,000 capital stock by John M. Trunk, Johanna Trunk, Rudolph W. Gallash and others.

Cullman, Ala.—Cement-block Factory.—J. S. Fuller Construction Co. is reported as to establish cement-block factory.

North Birmingham, Ala.—Street Improvements.—City is advertising for bids on 26 miles of curbing, 26 miles of sidewalks, 13 miles of Macadam streets and 3000 feet of brick pavement. Address The Mayor.

Selma, Ala.—Electric-light Plant.—F. M. Abbott, president of the Selma Street & Suburban Railroad Co., has purchased a tract of land on Okmulgee creek on which to build electric-light plant, to be operated by water-power obtained by the development of Okmulgee creek.

Wetumpka, Ala.—Laundry.—Wetumpka Steam Laundry incorporated with \$2500 capital stock by D. W. McCoy, J. R. Gamble, B. L. Gaddis, Jr., John A. Gaddis and F. Lloyd Tate.

ARKANSAS.

Batesville, Ark.—Box and Basket Factory. J. C. Silvers, Dallas, Texas, contemplates establishing box and basket factory.

Benton, Ark.—Stave Mill.—E. R. Norton will establish stave mill to cost \$3000; to erect shed 40x60 feet; will manufacture oak tight-barrel staves; 10,000 daily. H. G. P. Gorman is engineer in charge. (Recently reported.)

DeQueen, Ark.—Water-works.—City is reported to construct water-works. Address The Mayor.

Eldorado, Ark.—Ice Plant and Planing Mill. Eldorado Ice & Planing Mill Co. organized with \$50,000 capital stock. Jeff Hicks is president, W. T. Barnes vice-president, L. Sparkman second vice-president, G. K. Edwards secretary and J. W. Wormick treasurer.

Fitzhugh, Ark.—Cotton Gin.—Fitzhugh Gin Co., reported incorporated March 14 with \$5000 capital stock, will operate cotton gin with a daily capacity of five bales. Gin-house will be 20x64 feet and engine-room 40x32 feet. About \$5000 will be invested.

Harrison, Ark.—Zinc and Lead Mines.—Arkansas Zinc & Lead Co. has been organized to operate Denison mine and mill near Harrison.

Helena, Ark.—Chair Plant.—Ford-Johnson Company is preparing to enlarge its chair plant, expending several thousand dollars.

Jonesboro, Ark.—Log-loading Company.—Jonesboro Loading Co. incorporated with \$2500 capital stock for loading and supplying logs to sawmills and other manufacturing plants by R. T. Pierce, F. M. Fulk, E. J. Mason and H. D. Alfrey.

Lake Village, Ark.—Sawmill.—Morgan Company is arranging for the installation of sawmill. Contracts have all been placed.

Little Rock, Ark.—Lumber Plant.—Kibbe-Shuman Lumber Co. incorporated with \$15,000 capital stock by M. G. Kibbe, Irving Shuman and J. W. Jones.

Mound City (not a postoffice), Ark.—Levee Work.—Groves & Stevens, Cleveland, Ohio, will probably receive contract at 12½ cents per cubic yard on 100,000 cubic yards of canal work at Marion lake, which is to be drained by running water a distance of three miles into Ten-Mile bayou. Company was also lowest bidder at 2½ cents per cubic yard on 30,000 cubic yards of levee work at the Fletcher bayou.

Pine Bluff, Ark.—Water-plant Improvements.—Pine Bluff Light & Water Co., F. G. Bridges, president, will make extensive improvements to water-works, including the erection of new plant at pumping station, construction of water mains to surround water district of town, etc. (Company was reported February 14 as having contracted for the construction of 1,500,000-gallon concrete reservoir.)

Russellville, Ark.—Water-works.—The construction of water-works is under consideration. Richard M. Newport is chairman Board of Improvement.

Stuttgart, Ark.—Rice Mill.—Stuttgart Rice Mill Co. has been incorporated with \$50,000 capital to build plant of 250 barrels capacity in 10 hours; mill structure four stories high, 40x60 feet, brick or frame; warehouse or elevator to have capacity of 75,000 bushels; cost of buildings and equipment, \$25,000 to \$35,000; engineer or architect not yet engaged. G. W. Fagan is president, H. C. Bruner secretary, J. F. Whaley treasurer and Ray O. Burks manager.*

Warren, Ark.—Cotton-oil Mill.—Organized: Warren Cotton Oil Co., capitalized at \$100,000, with J. M. Bailey president, S. B. Meek vice-president, R. F. Powers treasurer and D. A. Bradham secretary.

Warren, Ark.—Cottonseed-oil Mill.—Company is reported as being organized with \$50,000 capital stock to establish cottonseed-oil mill. C. P. Reed of Memphis, Tenn., is said to be interested.

Yellville, Ark.—Mining and Milling.—Big Star Mining & Milling Co. incorporated with \$100,000 capital stock by Edwin Kelton, J. J. Geghan, S. S. Selgwald.

DISTRICT OF COLUMBIA.

Washington, D. C.—Chemical Plant.—Henry Chemical Co. has been incorporated with a paid-up capital stock of \$25,000 by Franklin O. Cox, 1420 6th street N. W.; Newton Edmonds, 423 Massachusetts avenue N. W.; Jesse H. Hedges, 3313 17th street N. W.; Thomas H. McKee, 1420 21st street N. W., and S. L. Willett, 930 F street N. W.

FLORIDA.

De Funiak Springs, Fla.—Water-works and Sewerage.—Solomon-Norcross Company and Hall-Ilges Company, associate engineers, 1622 Candler Building, Atlanta, Ga., have been appointed engineers for water-works and sewerage previously referred to. About \$23,000 will be expended. Dr. G. P. Henry is Mayor.

Florida—Phosphate Mines.—Florida Phosphate Mining Corporation, reported incorporated recently at Norfolk, Va., will mine land-pegble phosphate in Florida. F. S. Royster of Norfolk is president and Peter S. Gilchrist of Charlotte, N. C., is engineer in charge.

Jacksonville, Fla.—Ice Plant.—Springfield Ice Works incorporated with \$20,000 capital stock. James W. Spratt is president, Howard E. Harkishelmer vice-president and Geo. H. White secretary-treasurer. Company will build 25-ton plant.

Jacksonville, Fla.—Street Paving.—Reported that David M. Baker has contract for street paving.

Punta Gorda, Fla.—Fish and Ice Plant.—Reported that J. J. Heard and associates have purchased at \$68,000 the Consolidated Fish & Ice Co.'s plant and will undertake extensive improvements, including the erection of additional building to be equipped as cold-storage plant, etc.

St. Augustine, Fla.—Electric-light Plant.—City is considering installation of electric-light plant. Address The Mayor.

St. Augustine, Fla.—Seawall.—Jon. Geismann has contract to build a seawall extending 114 feet on the water front and 60 feet on Shenandoah street; work will soon begin.

Tallahassee, Fla.—Water-works.—The City Council on March 14 instructed the ordinance committee to prepare an ordinance authorizing the city to buy the present water-works, which are owned by a Philadelphia company, or install a new system. Address The Mayor.

Tampa, Fla.—Cigar Factories.—J. H. Drew has awarded contract to McGucken Bros. for the erection of two brick cigar factories, one to be occupied by Garcia, Viga & Co. and the other by Celestino, Garcia & Strauss; total cost about \$40,000.

Tampa, Fla.—Water-works.—Tampa Water Works Co. will undertake extensive improvements to its plant, probably doubling capacity.

GEORGIA.

Adel, Ga.—Electric-light Plant.—Town has purchased and will operate local electric-light plant. Address The Mayor.

Arlington, Ga.—Lumber Plant.—Stetson Lumber Co., American National Bank Building, Macon, Ga., has purchased the entire plant, including saw and planing mill, of the Arlington Lumber Co. Rift flooring is made at this mill, the daily capacity being about 50,000 feet. The company also has in the neighborhood of 10,000 acres of long-leaf yellow pine, purchase price for entire tract being about \$300,000.

Athens, Ga.—Mattress and Spring Bed Plant.—Athens Mattress & Spring Bed Co. incorporated with \$10,000 capital stock by N. D. Arnold, W. F. Dorsey, O. H. Arnold, Jr., Chas. J. O'Farrell and A. H. O'Farrell.

Atlanta, Ga.—Candy and Ice Cream Factory.—W. W. Griffin will superintend the

construction of addition to factory building of the Nunnally Company, plans for which were prepared by Harry L. Walker; four stories, 40x75 feet; brick; cost \$15,000.

Atlanta, Ga.—Building Materials, etc.—R. O. Campbell Coal Co. is arranging to deal in building materials, such as lime, cement, plaster, laths, shingles, etc., in conjunction with its present business of wholesaling and retailing fuel. A warehouse is now under construction; office, 10 Decatur street.*

Atlanta, Ga.—Laundry.—Trio Laundry Co. incorporated with \$88,000 capital stock and privilege of increasing to \$250,000 by Walter McElreath, E. H. Wilson and W. H. Harris.

Atlanta, Ga.—Excelsior Factory.—It is proposed to establish excelsior factory, and H. B. Bigham, 1109-11 English-American Building, is interested. Machinery will be purchased.*

Atlanta, Ga.—Tool Manufacturing.—Convertible Wrench & Vise Manufacturing Co. incorporated with \$100,000 capital stock by J. E. Maddox, C. G. Hannah, John T. Landers and J. T. Moody.

Atlanta, Ga.—Concrete Bridge.—Southern Railway, C. H. Ackert, general manager, Washington, D. C., will construct at Brookwood a reinforced concrete bridge 75 feet wide and 90 feet long, to cost about \$21,500. F. M. Edwards, engineer maintenance of way, Birmingham, Ala.

Atlanta, Ga.—Water-works Improvements. Bids will be received April 10 by Board of Water Commissioners, Park Woodward, general manager, for furnishing and erecting pressure filter plant with daily capacity of 4,000,000 gallons and for furnishing material and constructing concrete or reinforced coagulating basin and clear-water basin at Water-works Pumping Station No. 2. (City was reported February 7 to vote April 9 on the issuance of \$500,000 of bonds for improvements to water-works.)*

Augusta, Ga.—Construction.—McKenzie-Leon Construction Co. incorporated with \$50,000 capital stock by Charles F. McKenzie, Moise De Leon and Fair Dodd to contract for the construction of electric-light plants, pipe lines, water-works, sewers, etc.

Columbus, Ga.—Furniture Company.—Martin Furniture Co. incorporated with \$20,000 capital stock by William H. Martin and John C. Martin.

Decatur, Ga.—Water-works.—City has awarded contract to Walton & Mangum, Atlanta, Ga., for installing machinery at water-works building for pumping plant and laying pipe-line at a cost of \$10,000; work to be completed by October 1. (Referred to February 21.)

Elberton, Ga.—Cotton Compress.—Elberton Cotton & Compress Co. will erect brick and concrete building for the compressing and storing of cotton. About \$40,000 will be invested. W. E. Wallis is architect.

Gainesville, Ga.—Land Improvement.—Chartered: James J. Roberts Company, Inc., by James J. Roberts, J. W. Smith, R. E. Strickland, W. N. Dyer, A. S. Richards and Robt. W. Smith.

Georgia—Timber Lands.—Cherokee Lumber Co. incorporated with \$18,000 capital stock by James H. Callahan, Chauncy Whitmyre, Thomas W. Winne and others of Schenectady, N. Y.

Juliette, Ga.—Bridge.—Juliette Milling & Glover Manufacturing Co. is reported soon to begin the erection of bridge across the Ocmulgee river connecting Juliette and Glovers; cost about \$18,000.

Macon, Ga.—Water-power Electrical Plants. Bibb Power Co., reported at length last week, has begun active work to develop its water-powers, one each on Oconee, Flint and Ocmulgee rivers, near Macon. It has had New York engineers examine the properties, and they estimate that 50,000 horse-power can be obtained. All the power is to be transmitted to a central station in Macon. The company is not ready to state specifications of the machinery needed. W. J. Massee, president, Grand Building.

Macon, Ga.—Pottery.—C. E. Harter of Macon and A. Banner of England are arranging for the erection of pottery to manufacture table china and other articles from kaolin deposits in Bibb county. It is proposed to have the general plant under one roof.

Madison, Ga.—Electric Lights, Water-works and Sewerage.—The city voted on March 15 \$65,000 for improving electric-light plant, building of water-works and sewerage system; E. H. Davis, Griffin, Ga., engineer; P. S. Burney, Mayor.

Raymond, Ga.—Brick Works.—James R. Nolan, Senola, Ga., contemplates establishing brick works.

Rome, Ga.—Electric-light Plant, Sewerage and Street Paving.—City will vote April 16 on the issuance of \$175,000 of bonds for building electric-light plant, new sewers and paving streets. Address The Mayor.

Savannah, Ga.—Cigar Factory.—Lee Roy Myers Cigar Co. is reported to establish cigar factory. Vivian Myers will be local manager.

Summerville, Ga.—Cotton Mill.—Summerville Cotton Mills, previously reported, has about completed main mill, 101x343 feet, and will install 5000 spindles and 120 looms. This is 1000 more spindles than originally announced to be installed at first. Steam power will be used and cotton duck will be manufactured. All contracts have been awarded.

Toccoa, Ga.—Furniture Factory.—W. C. Edwards is organizing Toccoa Furniture Co. to establish factory; will erect two buildings, each two stories high, 75x150 feet, in size. Capital stock will probably be \$25,000.*

Waynesboro, Ga.—Laundry.—Waynesboro Steam Laundry incorporated with \$1600 capital stock by H. E. McClure, H. B. McMaster, E. E. Chance, R. C. Neely, L. P. Herrington and others.

KENTUCKY.

Albany, Ky.—Oil Wells.—W. L. Perkins, J. G. Long, S. G. Smith and E. Bertram will drill for oil in Clinton and Scott counties.

Bowling Green, Ky.—Gas System.—City will let franchise March 30 to the highest bidder for establishing gas system. W. H. Phillips is City Clerk.*

Bowling Green, Ky.—Concrete Plant.—Bowling Green Concrete Co. organized to do all kinds of concrete work, such as building sidewalks, making sewer pipe and hollow brick for building purposes; W. H. Jones, president, and I. B. Cooke, secretary and general manager.

Glasgow, Ky.—Water-works.—City will grant franchise March 30 to furnish city with water; R. W. Comer, Mayor.*

Heller, Ky.—Coal Mines.—J. W. Cockill has leased coal lands on Marrowbone creek (from the Big Sandy Company, Equitable Building, Boston, Mass.) and will at once develop a \$100,000 mining operation.

Louisville, Ky.—Dump-car Works.—Reported that the Continental Car & Equipment Co. of Louisville and 17 Battery Place, New York, is preparing to erect additional buildings and install additional machinery to increase its output of dump cars and other similar rolling stock for railway and industrial purposes. This company recently completed its initial plant, reported last year by the Manufacturers' Record.

Louisville, Ky.—Underground Wire Conduits.—It is understood the city will begin by April 1 the construction of its proposed underground conduits, in which will be placed the wires of the telegraph, telephone and electric companies operating locally. Probably about 1,500,000 feet of conduits will be laid and about \$500,000 be expended. Board of Public Works is in charge.

Louisville, Ky.—Plaster Plant.—Atlas Wall Plaster Co. incorporated with \$10,000 capital stock by S. W. Stopher, J. S. Minor and W. T. Armstrong.

Louisville, Ky.—Paving Improvements.—Board of Public Works has advertised for bids for the improvement of Slaughter avenue from Baxter avenue to Everett avenue, and Market street from 10th to 12th street. Streets will be paved with asphalt and gutters will be of vitrified brick. Bids will be opened March 27. Probable cost of improvements estimated at \$27,000.

Mt. Sterling, Ky.—Sewerage and Paving.—City will vote on the issuance of \$100,000 of bonds to construct sewerage system and lay brick streets in business section. Address The Mayor.

Newport, Ky.—Coal Transfer Station.—New River Company, Macdonald, W. Va., is proceeding with construction of its proposed coal transfer station at Newport.

Williamsburg, Ky.—Telephone System.—Williamsburg Home Telephone Co. has been organized to take over the Cumberland River Telephone Co. and install telephone system in Williamsburg, for which franchise has been secured. John Woodward is president, H. Woodward vice-president and Lyman R. Benjamin secretary-treasurer; capital stock to be \$10,000.

Winchester, Ky.—Creamery.—Bluegrass Creamery Co. incorporated with \$8000 capital stock by J. Hood Smith, T. C. Robinson, Davis S. Gay, H. Clay Hodgkin and others.

LOUISIANA.

Alexandria, La.—Electric-light Plant.—Reported that the Alexandria Electric Co. is installing additional machinery, increasing the capacity of plant.

Alexandria, La.—Lumber Plant.—Hugh Corry of Colfax, La., and associates, reported February 23 as having purchased the plant of the Caddo-Rapides Lumber Co., will operate the plant, installing addition to planing mill of three machines. It is proposed to amend the charter, increasing capital stock to \$100,000 and operate as the Caddo-Rapides Lumber Co., Ltd. Mr. Corry will be president, J. W. Bolton vice-president, W. D. Curry secretary and Charles H. Teal treasurer. All equipment has been purchased.

Benton, La.—Oil and Mineral Development. Phelps-Lake Oil & Mineral Co. incorporated with \$20,000 capital stock to develop oil and mineral lands in Bossier parish. G. E. Glimmer is president, R. E. Wyche vice-president, W. G. Boggs secretary and N. W. Sentell treasurer.

Covington, La.—Bottling Works.—Pineland Springs Bottling Works incorporated with \$25,000 capital stock; E. P. Singletary, president; Max Schwabacher, New Orleans, La., vice-president; E. J. Domerque, secretary-treasurer, and E. Del Fosse, manager.

Franklin, La.—Refinery.—Oak Bluff Planting & Manufacturing Co. will rebuild burned sugar refinery on an enlarged scale.

Houma, La.—Electric-light Plant.—City is reported to issue \$25,000 of bonds to construct electric-light plant. Address The Mayor.

Jennings, La.—Canal.—Jennings Canal Co. will make improvements to rice canal to cost \$16,000; buildings added to be 35x44 feet; capacity 30,000 gallons per minute; architect, A. M. Lockett & Co., New Orleans, La.; engineer, John Gamble; manager, S. J. Johnson. (Reported recently.)

Kenner, La.—Cannery.—Kenner Canning & Packing Co., Ltd., organized to build a plant covering an area of 8000 square feet. Ed. Staulig is president, M. Lozarone vice-president, Reuben Vandervort secretary and Fred Schneck treasurer.

Lake Charles, La.—Canal Construction.—North American Land & Timber Co., is reported as arranging to construct canal from Sweet Lake east to Lake Misere, a distance of 10 miles, providing an inland waterway between the Mermentau and the Calcasieu. H. G. Chalkley is manager.

Lecompte, La.—Electric-light Plant.—City is considering the erection of electric-light plant. Address The Mayor.

Mansfield, La.—Handle and Spoke Factory. J. C. Stokes has secured site on which to locate plant for manufacturing ax handles, wagon spokes, etc.

New Orleans, La.—Plumbing.—McDonough Plumbing Co. chartered with \$5000 capital stock. Edward McDonough is president, John A. McDonough vice-president, S. Fechtelmer secretary-treasurer and Charles McDonough manager.

New Orleans, La.—Chemical Works.—Favo Medicine Co. organized with \$25,000 capital stock by Robert Wetmore, Adam Seckinger and Louis Mazurette.

New Orleans, La.—Railroad Repair Shops, etc.—Reported that the Louisville & Nashville Railroad will increase terminal facilities, erecting repair shops, turntables, roundhouses, etc. W. H. Courtenay, Louisville, Ky., is chief engineer.

New Orleans, La.—Turpentine Distillery.—Southern Turpentine Co. incorporated with \$60,000 capital stock by Dr. Philip Asher, Charles Phillips, D. Sessler, A. S. Picard, F. A. Earhart and others.

New Orleans, La.—Land Improvement.—Hollander Realty Co. incorporated with an authorized capital stock of \$64,000 by Simon Hollander, J. Frankel, Ed. Goetz, I. Dahlman and others.

New Orleans, La.—Sugar Growing and Refining.—Levert-Morvant Planting Co. incorporated with \$300,000 capital stock to plant sugar cane, operate sugar mills and refineries, rice mills, etc. Emile N. Morvant is president, John B. Levert vice-president and John B. Levert, Jr., secretary-treasurer.

New Orleans, La.—Land Improvement.—Catahoula Realty Co. organized with \$30,000 capital stock. Harris Hyman is president, E. A. Neugne vice-president and Simon J. Newman secretary-treasurer.

New Orleans, La.—Molasses and Syrup Refining and Packing.—New Orleans Molasses & Packing Co. has been chartered with \$75,000 capital stock to succeed the New Orleans Molasses Co., manufacturing molasses,

syrups and extracts and canning and bottling same. Charles J. Alley is president, William E. Hall vice-president and William H. Carter secretary-treasurer.

New Orleans, La.—Orange Grove and Truck Farm.—Dicks Planting Co. organized to develop lower coast orange grove and truck farm on 400 acres 45 miles from New Orleans. Charles B. Dicks is president, F. A. Dicks vice-president and T. J. Ferguson secretary-treasurer.

Ruddock, La.—Sawmill.—Ruddock-Orleans Cypress Co., New Basin and Carrollton avenues, New Orleans, La., has begun the reconstruction of sawmill recently burned and proposes having same in operation by July 1; annual capacity, 12,000,000 to 15,000,000 feet of cypress lumber. E. V. Preston will be general manager.

Shreveport, La.—Lumber Plant.—Allen-Wadley Lumber Co., recently incorporated with \$50,000 capital stock, plans to build warehouse and lumber sheds, three or more, 50x150 feet, the buildings and equipment to cost from \$15,000 to \$20,000. Product, all kinds of building materials. W. G. Wadley is president.

Shreveport, La.—General Contractors.—Chatwin Bros. Rip-Rap & Contracting Co. has organized with A. G. Chatwin, president; Sam Chatwin, vice-president, and C. L. Chatwin, secretary-treasurer, for general purposes. (Reported incorporated last week with \$200,000 capital stock.)

MARYLAND.

Baltimore, Md.—Extract Plant.—Charles M. Anderson, architect, 324 North Charles street, has distributed plans and specifications for the erection of proposed powerhouse and plant for J. S. Young Company at Boston and Elliott streets; one structure, to be 219x50 feet, three stories high, with an extension 36x50 feet to present building; bids to be submitted March 18; Adams & Schwab, 559 Calvert Building, mechanical engineers. (Referred to last week.)

Baltimore, Md.—Residential Development. Louis J. Roth, 3929 Park Heights avenue, has purchased a lot of ground at Forest and Oakfield avenues in Forest Park for residential purposes.

Baltimore, Md.—Rug Factory.—Incorporated: Baltimore Rug Manufacturing Co., with capital stock of \$5000, by J. Edward Killalea, Samuel Ottenheimer, Emanuel Ottenheimer and others; offices at 2 West Preston street.

Baltimore, Md.—Engineering.—International Engineering Co. has been incorporated with a capital stock of \$1000 by Lester Latham, 1124 Madison avenue; Thorvald A. Lee, Bellevue and Eldorado avenues; William T. Morgan, 36 East Montgomery street, and associates.

Baltimore, Md.—Paving.—Municipal Board of Awards, City Hall, has awarded contract to Warren Brothers Company, 608 Fidelity Building, at \$7523.50, for a bitulithic pavement on Washington street between North avenue and the entrance to Clifton Park.

Baltimore, Md.—Skating Rink.—Charles A. Morrow and William H. Morrow, 416 West Saratoga street, with associates, have incorporated the New Palace Roller Skating Rink Co. with a capital stock of \$20,000.

Baltimore, Md.—Coal Company.—Romulus R. Griffith, 1529 McCulloh street; John R. Ames, 114 West Franklin street, and others have incorporated the Tacoma Coal Co. with a capital stock of \$100,000.

Baltimore, Md.—Substation.—Roberts & Abbott Company, 801 Maryland Trust Building, has distributed plans and specifications for the erection of a substation at Academy Junction for the Washington, Baltimore & Annapolis Electric Railway Co. Structure will be two stories high, 60x73 feet. Hopkins-Barnett Company, 1157 Calvert Building, is estimating.

Baltimore, Md.—Manufacturing Plant.—Central Metal Supply Co. has awarded contract to John Waters, 23 East Center street, for the erection of addition to its plant at 608-611 East Lombard street; structure to be three stories high, 59x56 feet; cost about \$3500.

Baltimore, Md.—Paving.—The city will pave Fairmount avenue, between car tracks, from Lakewood avenue to the eastern city limits, remainder of street to be paved with vitrified bricks at the expense of abutting property-owners. Address City Engineer, City Hall.

Baltimore, Md.—Residential Development.—John J. Hurst, 1201-3 Calvert Building, has purchased about one block of land on St. Paul boulevard near 31st street for residential purposes.

Baltimore, Md.—Candy Factory.—Guth Chocolate Co. has awarded contract to E. E. Blackman for a four-story addition to its plant at 1430 to 1434 Pennsylvania avenue. Structure will be 41x45.3 feet; equipped with improved machinery; cost about \$7500.

Baltimore, Md.—Trunk Factory and Store. A. Lowther Forrest, architect, 316 Professional Building, is preparing plans and specifications for the erection of factory and store building at 307 North Calvert street for C. J. Dunn Company. Structure will be 23x100 feet, four stories high; front of pressed brick with limestone trimmings; galvanized-iron cornice; metal window frames and sash; wireglass; electric elevator; steam heating; electric lights, etc.; plate-glass front for first floor.

Betterton, Md.—Land Improvement.—Betterton Bayside Land Co. incorporated by Howard Turner, Charles H. Price, Harvey Brice and others; has purchased 250 acres of land on Chesapeake bay, which will be divided into building lots and improved.

Cumberland, Md.—Door and Sash Plant.—Eastern Door & Sash Co. incorporated with \$75,000 capital stock; H. G. Kennedy, president; A. H. Amick, vice-president; D. P. Miller, treasurer, and David Miller, secretary; Frank G. Kennedy, manager.

Frederick, Md.—Telephone System.—Frederick County Telephone & Telegraph Co. is arranging to remodel the Examiner Building recently purchased, installing new equipment, etc. It is also proposed to install a multiple cable system, replacing the present overhead wires.

Hagerstown, Md.—Airbrake Factory.—Duke-smith Airbrake Co., Frank H. Dukemith, Meadville, Pa., president, contemplates establishing plant in Hagerstown to manufacture the Dukemith airbrake now being built under contract by the Homestead Valve Co., Homestead, Pa. C. W. Mitchell, representing the company, has registered at the Windsor Hotel.

Hancock, Md.—Cannery.—J. T. Bridges will establish canning factory.

Laurel, Md.—Electric-light Plant and Sewerage.—City contemplates issuing \$50,000 of bonds for electric-light plant and sewerage system. William E. Gilbert is Mayor.

Lonaconing, Md.—Reservoir.—Midland Elk Lick Water Co. will expend \$3000 in increasing reservoir capacity; William Atkinson, manager.

MISSISSIPPI.

Barkleys, Miss.—Sawmill.—Fred D. Glenn of Onawa, Iowa, will build sawmill with daily capacity of 20,000 feet.

Columbia, Miss.—Planing Mill.—Whitfield Planing Mill Co. incorporated with \$10,000 capital stock by T. D. Whitfield, Buford Larkin, B. A. Williamson and others.

Edwards, Miss.—Water-works.—The city has engaged C. H. Jenks, Fayette, Miss., as engineer in charge of water-works. Details have not been decided. (Mention was made last week of proposal to issue \$20,000 of bonds for water-works.)

Hattiesburg, Miss.—Lumber.—Armbricht-Tompkins Lumber Co. incorporated with \$10,000 capital stock by J. C. Tompkins, C. H. Armbricht and others.

Hattiesburg, Miss.—Publishing.—Hattiesburg Printing & Publishing Co. organized with \$25,000 capital stock by F. R. Birdsall, Yazoo City, Miss.; H. A. Camp, B. McClanahan and A. J. Harris of Hattiesburg.

Jackson, Miss.—Bridges.—A. I. Skene of James Skene & Sons, St. Louis, Mo., is reported in New Orleans ordering material to be used in the construction of the New Orleans Great Northern bridges between Terry and Jackson, Miss. His firm has contract for building concrete arches, piers and box culverts between the two cities mentioned representing an expenditure of \$40,000 to \$50,000.

Yazoo City, Miss.—Bent-wood Factory.—J. G. Hay of Toronto, Canada, is reported as investigating for site on which to establish bent-wood factory. Business League can probably give information.

Fontainebleau, Miss.—Sawmill.—Stuard, Sproul & Hewes of Gulfport, Miss., are reported as installing mill.

Meridian, Miss.—Bottling Works.—West Point Coca-Cola Bottling Works incorporated with \$6000 capital stock by Hugh Smith, Meridian; C. C. Clark, New Albany, Miss., and A. K. Weaver, Corinth, Miss.

Schlatter, Miss.—Drug Company.—Planters' Drug Co. incorporated with \$10,000 capital stock by W. J. Brown, R. M. Brown, W. L. Flake and others.

Sumrall, Miss.—Drug Company.—Sumrall Drug Co. incorporated with \$10,000 capital stock by J. H. Nutt, J. R. Hudson and others.

Vicksburg, Miss.—Ice Plant.—C. J. Miller is promoting the establishment of an ice plant, for which \$11,000 has been subscribed.

MISSOURI.

Bloomfield, Mo.—Water-works, etc.—Bloomfield Electric Light, Heat & Power Co. is reported to install water-works and hot-water system.

Bucklin, Mo.—Coal Company.—Bucklin Coal Co. incorporated by John Williamson, C. D. Veal, George T. Bell and others.

Carondelet, Mo.—Portland-cement Plant.—It is understood that the Continental Brick Co., David A. Marks, president, St. Louis, Mo., has granted to Eastern capitalists the privilege of building a large Portland-cement plant on the brick company's land near Carondelet. The proposition is said to involve the investment of about \$1,750,000 for establishing a plant which will manufacture 2500 barrels of Portland cement daily. Limestone, clay and other raw materials are said to be available.

Carthage, Mo.—Stone Quarry.—Carthage Quarry Co., mentioned February 14 as making extensive improvements to plant, is installing machinery at both quarry and mill, increasing the present capacity. An additional building of stone construction 51x81 feet is being erected. An entire new steam plant will be installed and a separate stone building will be provided for it; electric lighting plant, air compressors, air drills and stone planer will be included in equipment. A gas engine and pump will be used to carry water line from river to quarry plant; daily capacity 2000 cubic feet of sawed stone. M. A. McNeerney is manager.

Carthage, Mo.—Water-works.—City has voted affirmatively the issuance of \$250,000 of bonds for municipal water-works. Address The Mayor.

Carthage, Mo.—Lead and Zinc Mines.—Mount Vernon Mining Co. incorporated with \$40,000 capital stock to develop the John Durby lead and zinc mines, recently purchased. John P. Guthrie, Mt. Vernon, Ill., is president, John Durby, Carthage, vice-president and Jerome Mannen, Mt. Vernon, Ill., secretary-treasurer.

Clinton, Mo.—Street Paving.—Contract will be let March 26 for paving with vitrified brick about three miles of streets. G. V. Berry is City Clerk.*

Granada, Mo.—Woodworking Plant.—Granada Mercantile & Manufacturing Co. has been incorporated with \$10,000 capital stock for the manufacture of telephone and telegraph pins, brackets and steps; buildings 30x70 and 20x40 feet; capacity 30,000 daily; now in operation; officers, C. P. Anderson, A. C. Dally, J. S. Hamilton, C. E. Large, R. Anderson; architect, C. P. Anderson; engineer in charge, J. S. Hamilton.

Joplin, Mo.—Mining.—Hunter Mining Co. incorporated with \$20,000 capital stock by Q. T. Merkel, E. E. Gregg, W. J. Hunter and others.

Joplin, Mo.—Zinc Mines.—Chitwood-Bessie Zinc Co. incorporated with \$100,000 capital stock by F. B. Wilcox, E. E. Julian, N. C. Belch and others.

Joplin, Mo.—Lead and Zinc Mines.—Aladdin Lead & Zinc Co. incorporated with \$100,000 capital stock by Wm. P. Welton, E. L. Montgomery, F. B. Wilcox and others.

Joplin, Mo.—Zinc Mines.—Little Pearl Zinc Co. incorporated with \$50,000 capital stock by D. D. Molloy, H. O. Williams, C. L. Bullock and others.

Joplin, Mo.—Lead and Zinc Mines.—Reported that the Missouri Lead & Zinc Co. is considering making improvements to plant, including an addition to power-house.

Kansas City, Mo.—Dairy.—Chartered: Central Dairy Co. with \$5000 capital stock by C. A. Bebler, R. J. Sexton and H. J. Kenney.

Kansas City, Mo.—Overall and Clothing Factory.—Burnham-Munger Manufacturing Co. has increased capital stock from \$25,000 to \$300,000.

Kansas City, Mo.—Ice Plant.—Home Ice & Refrigerator Co., Paul A. Simonds, president, has awarded contract to Flannagan Bros. for the erection of ice plant with daily capacity of 100 tons; to be completed by June 1.

Macon, Mo.—Contracting, etc.—Macon Contracting, Ice, Fuel & Park Co. incorporated with \$7500 capital stock by Philip Ganse, George Kohl and Theodore Reichel.

St. Louis, Mo.—Construction.—Keystone Realty & Construction Co. incorporated with \$25,000 capital stock by Rob G. Kirsch, Aug. F. Pollman, Carolus Bajohr and others.

St. Louis, Mo.—Contractors' Supplies, etc. Corby Company incorporated with \$20,000 capital stock by J. Boudry Corby, W. Edwin Corby and M. A. Mitchell.

St. Louis, Mo.—Lumber.—Midland Lumber & Tie Co. incorporated with \$3000 capital stock to deal in railroad ties, piling, bridge timber, etc., by Simeon P. Folsom, Cornelius H. Fauntleroy and Jos. P. Widen.

St. Louis, Mo.—Confectionery Plant.—Southern Confection Co. incorporated with \$5000 capital stock by F. C. Krummenauer, Adolph A. Mayne and Walter L. Manke of St. Louis and J. Geo. Dietrich of Chicago, Ill.

St. Louis, Mo.—Printing Plant.—Mendle Printing Co. incorporated with \$10,000 capital stock by Isador Mendle and Eli Van Raalte.

St. Louis, Mo.—Coal Mines.—Incorporated: J. D. Barth Coal Co. with \$100,000 capital stock by John Bruner, J. D. Barth and B. M. Whittemore.

St. Louis, Mo.—Water Company.—Charles Noel Water Co. incorporated with \$20,000 capital stock by Charles Noel, W. N. Davis and F. Woodyer.

St. Louis, Mo.—Metal Plant.—Acme Metal Co. incorporated with \$10,000 capital stock by Joseph Mathes, Henry S. Lewis and Zachariah Lippe.

St. Louis, Mo.—Saddlery Plant.—Straus Saddlery Co. incorporated with \$150,000 capital stock by Siegmund J. Schuster, Isaac Sichel, Jacob D. Straus and others.

Tipton, Mo.—Lumber.—Incorporated: William Schmidt Lumber Co. with \$15,000 capital stock by William Schmidt, Elizabeth Schmidt and Christina Schmidt.

NORTH CAROLINA.

Asheville, N. C.—Ice and Cold-storage Plant.—Carolina Ice & Coal Co. will build a 100-ton ice and cold-storage plant. A two-story brick building will be erected. About \$50,000 will be invested.

Bessemer City, N. C.—Cotton Mill.—Smith Cotton Mill Co., reported in December as to build 6000-spindle plant, is erecting buildings for its equipment. It will have 5000 spinning spindles, 3000 twister spindles, etc. All machinery has been purchased. J. A. Smith is president.

Burlington, N. C.—Housefurnishing.—Burlington Housefurnishing Co. incorporated with \$50,000 capital stock by J. L. Welborn, J. L. Comer and J. W. Welborn.

Candler, N. C.—Building and Contracting Company.—Arko Building & Contracting Co. incorporated with capital stock of \$30,000 by Geo. W. Vaughan, Harry L. Snodgrass and Catherine Vaughan.

Canton, N. C.—Lumber Plant.—Moffett Lumber Co. incorporated with \$50,000 capital stock to deal in timber lands, operate manufacturing plants, etc., by C. Todd Moffett, E. M. Moffett and J. R. Morgan.

Carbonton, N. C.—Coal Mines.—D. P. Bible, Glendon, N. C., has leased and will develop coal-mining property.

Charlotte, N. C.—Leather Belting Plant.—It is stated that the Charlotte Leather Belting Co., V. J. Guthrie, general manager, will install additional equipment, increasing the capacity of plant.

Cherryville, N. C.—Cotton Mill.—Cherryville Manufacturing Co. has awarded contract for nine twistlers of 208 spindles each, 14 revolving flat-top cards, etc., costing \$20,000. (Recently referred to.)

Cherryville, N. C.—Cotton Mill.—Gaston Manufacturing Co. has engaged Stuart W. Cramer & Co. of Charlotte, N. C., as architects for building its additional mill (5000 spindles) reported recently; building to be 72x243 feet; modern construction; it and machinery to cost about \$125,000.

Cool Spring, N. C.—Flour Mill.—Reported that J. M. Stroud and C. D. Crouch are completing arrangements for the establishment of roller mill.

Enfield, N. C.—Knitting Mill.—Enfield Knitting Mills will rebuild plant reported burned at a loss of \$40,000. George T. Andrews is secretary-treasurer.

Forest City, N. C.—Publishing.—Herald Publishing Co. incorporated with \$25,000 capital stock by W. H. Hicks, G. W. Rollins and others.

Gold Hill, N. C.—Machine Shop.—C. R. Morgan is reported to build machine shop.

Greensboro, N. C.—Window-sash Lock.—Burglar-proof Ventilating Sash Lock Co. incorporated with \$10,000 capital stock by Ernest Clapp, J. H. Hopkins and Edwin E. Cartland.

Greenville, N. C.—Paving and Sewerage.—City will soon vote on bond issue of \$75,000 for sewerage extension and street paving. Address The Mayor.

Greensboro, N. C.—Patent-U-Re-Car Co. incorporated with \$100,000 capital stock by Edward Roe Harrison, John A. Harrison and R. A. Sills.

Henderson, N. C.—Sawmills, etc.—W. D. Rose Company incorporated with \$2400 capital stock to equip and operate sawmills, etc.; W. D. Rose, G. A. Rose, S. S. Parham and J. H. Parham, incorporators.

High Point, N. C.—Public Improvements.—City will vote April 16 on the issuance of \$75,000 of bonds for street improvements, sewer extension, improving and enlarging water-works. Ed L. Ragan is City Clerk.

Kings Mountain, N. C.—Sash, Door and Blind Factory.—Kings Mountain Lumber Co. is the title of company reported incorporated March 14 to operate sash, door and blind factory. A building 50x100 feet will be erected. About \$10,000 will be invested in building and equipment. D. C. Mauney is secretary-treasurer and H. F. Peterson superintendent and general manager. All equipment has been purchased.

Louisburg, N. C.—Plow Works.—Louisburg Plow Works incorporated with \$20,000 capital stock by O. C. Gregory, E. L. Harris and W. H. Macon and others.

Oxford, N. C.—Sewerage.—City will vote May 7 on the issuance of bonds for constructing sewerage system. W. A. Devin is Mayor.

Piedmont, N. C.—Bottling Works.—Piedmont Pepsi-Cola Bottling Co. incorporated with \$50,000 capital stock by O. C. Peters, W. C. Peters, D. A. Lynch and C. M. Iney.

Raleigh, N. C.—Plumbing, etc.—G. L. Vinson Co. incorporated with \$10,000 capital stock by G. L. Vinson, Florence B. Vinson, J. M. Broughton and others.

Randleman, N. C.—Cotton Mill.—Randleman Hosiery Mills Co. organized to consolidate Pearl Hosiery Manufacturing Co. and Randleman Hosiery Mills and increased capital stock from \$25,000 to \$50,000.

Rockwell, N. C.—Cotton Mill.—Paul Barringer of Mt. Pleasant, N. C., contemplates organizing company to build cotton mill at Rockwell; to be driven by electricity from Whitney Company's water-power electrical development; 5000 spindles and manufacture yarns. Later a weave department may be added, together with an overall factory to work up the cloth. Plans and specifications will not be drawn until stock is subscribed. Mr. Barringer is president. (Recently mentioned.)

Rocky Mount, N. C.—Building Company.—Home Building Co. incorporated with \$25,000 capital stock by Jas. P. Bunn, C. H. Harris and others.

Sallabury, N. C.—Flour and Meal Mill.—South River Milling Co., reported incorporated March 7 under South River, N. C., will operate 65-barrel flour mill and 200-bushel meal mill. Building has been erected and machinery purchased. Water-power will be used to operate the plant. J. B. Foard is president, G. W. Fowler vice-president and P. O. Tatum manager and secretary-treasurer. Address R. F. D. No. 1.*

Sanford, N. C.—Buggy Factory.—It is proposed to organize company with \$10,000 capital stock to establish buggy factory. B. C. Pearce is interested.

Smithfield, N. C.—Telephone System.—Johnson County Telephone Co. incorporated with \$10,000 capital stock. W. L. Woodall is president; F. K. Broadhurst vice-president and H. P. Stevens secretary-treasurer.

Statesville, N. C.—Manufacturing Plant.—James Kerr and R. L. Flanagan are making improvements to the tobacco plant of H. Clarke & Sons, recently purchased, probably equipping same for manufacturing purposes when electric power is available.

Troy, N. C.—Cotton Mill.—Francis Cotton Mills increases capital stock to \$225,000.

Warsaw, N. C.—Brick and Tile Plant.—Union Brick & Tile Co. incorporated with \$50,000 capital stock by D. B. Faison, A. M. Faison and J. E. Richwine.

Waynesville, N. C.—Timber Transportation.—Soco & Oconalufy Flume Co. incorporated with \$250,000 capital stock by J. O. Bowman, J. Edward Ackley and John N. Schoolbred to build and operate flumes for transporting lumber.

Williamston, N. C.—Buggy Plant.—Martin County Buggy Co. incorporated with capital stock of \$25,000 by T. J. Smith, J. G. Godwin, Wheeler Martin, Geo. W. Blount, W. C. Manning and others.

Winston-Salem, N. C.—Electric and Construction Company.—Twin City Electric & Construction Co. incorporated with \$25,000 capital stock by S. L. Blackburn, E. G. Couch and A. H. Galloway.

Winston-Salem, N. C.—Candy Factory.—R. B. Horn Company incorporated with an authorized capital stock of \$125,000 by R. B. Horn and D. M. Colbert of Winston-Salem; J. A. Mokie of Yadkinville, N. C., and William Horn, East Bend, N. C., to manufacture candy; manufacture, refine and deal in syrup, molasses, sugar, etc.; company has

purchased a six-story factory building, with floor space of 40,000 feet, which will be equipped with modern machinery.

SOUTH CAROLINA.

Anderson, S. C.—Street Improvements.—City has voted affirmatively the issuance of \$75,000 of bonds for street improvements, referred to February 28. Address The Mayor.

Bishopville, S. C.—Electric-light System.—Bishopville Light & Power Co. has accepted the proposition of the Town Council to purchase its electrical system, and the plant will be transferred for \$20,000, part cash and the balance in instalments. Address The Mayor.

Bishopville, S. C.—Courthouse.—Lee county will build a new courthouse at a cost of \$50,000. Drawings not yet complete, but building will be classic in style, of brick with stone trimmings; ordinary construction, with fireproof vaults and record-room; steam-heating plant; electric-lighting plant; architects, Edwards & Walter, Columbia, S. C. Bids will be opened in a few weeks.

Columbia, S. C.—Metal Plant.—Columbia Metal Manufacturing Co. incorporated with \$5000 capital stock by Charles Hamsley and C. R. Cheshire to engage in general metal and roofing work.

Greer, S. C.—Cotton Mill.—Victor Manufacturing Co., referred to last week, is installing some new machinery, but details are not stated.

Laurens, S. C.—Cotton Mill.—Watts Mills has let contract to T. C. Thompson & Bros., Birmingham, Ala., for erection of addition to weave shed, for which J. E. Birrine of Greenville, S. C., is architect; 8000 spindles will be added; total expenditures about \$80,000. (Recently mentioned.)

Pacolet, S. C.—Power-house, Boiler-house, etc.—Geo. H. Cutting & Co., Worcester, Mass., have contract to erect power-house 59'8"x78'4", boiler-house 52'8"x73'4" and brick chimney 175 feet high; store building, two stories, 78x225 feet, and office building for the Pacolet Manufacturing Co. (main office Spartanburg, S. C.); all buildings to be constructed of brick. Lockwood, Greene & Co., Boston, Mass., engineers in charge. (Previously mentioned.)

Rock Hill, S. C.—Sewerage System.—City will engage an engineer to make preliminary surveys to estimate approximate cost of constructing sewerage system previously mentioned. When this is completed it is proposed to call an election to vote on a bond issue. J. M. Cherry is chairman committee of City Council.

TENNESSEE.

Bristol, Tenn.—Lumber Plant.—E. R. Spotswood & Sons has been incorporated with \$150,000 capital stock by A. M. Spotswood, F. M. Spotswood, F. D. Spotswood, C. C. Spotswood and H. H. Field.

Chattanooga, Tenn.—Pulley Manufacturing.—Reported that G. T. Eames of Adrian, Mich., is organizing company with \$30,000 capital stock to manufacture wooden pulleys for machine shops.

Chattanooga, Tenn.—Public Improvements.—City has voted affirmatively the issuance of \$1,000,000 of bonds for public improvements, mentioned February 28. Address The Mayor.

Dyersburg, Tenn.—Stave Plant.—Fields-Rupe Stave Co. incorporated with \$16,000 capital stock by J. J. Fields, W. H. Rupe, R. M. Hall, J. C. Doyle and A. A. Hall.

Gallatin, Tenn.—Manufacturing.—Orman Manufacturing Co. incorporated with \$5000 capital stock by H. Orman, Wm. G. Harris, J. T. Durham, Claude Newton and C. N. House.

Harms, Tenn.—Cotton Mill.—Valley Cotton & Grain Manufacturing Co., recently reported incorporated with capital stock of \$75,000, proposes building a cotton mill of 5000 or 6000 spindles to be operated in connection with flour mill now owned by Harms Milling Co. Its present water-power plant will be enlarged to provide 225 to 250 horsepower; cost and other details of buildings and machinery now being considered.

Hartsville, Tenn.—Hoop Mill.—Marshall, King & Co. will establish hoop mill; will erect 20x60-foot weatherboarded sheds and install machinery for daily output of 12,000 hoops; will possibly also install machinery for electric lighting.*

Knoxville, Tenn.—Water-works and Pumping Station.—Reported that the Knoxville Water Co. has purchased site on which to erect reservoir and pumping station.

Jonesboro, Tenn.—Water-works.—City has petitioned Legislature for authority to issue \$10,000 in bonds for construction of water-works; H. C. Beauchamp, chairman water-works committee.

Knoxville, Tenn.—Shirt Factory.—Knox

Shirt Co. incorporated with \$10,000 capital stock. J. C. Fitzgerald is president, W. J. Donohue secretary-treasurer and H. C. Graffey general manager. Machinery has been ordered.

Lebanon, Tenn.—Cannery.—Lebanon Packing Co., J. H. Gleaves, manager, has purchased complete canning equipment to be installed in factory building three stories high, 35x75 feet, now being erected. A power plant will also be built; daily capacity, 30,000 cans. (A company was reported February 7 as being organized with John C. Sanders president to establish cannery.)

Memphis, Tenn.—Excavation Work.—Illinois Central Railroad has awarded contract to H. C. Hodges & Son, Birmingham, Ala., for about 700,000 yards of excavation work. About \$350,000 will be expended.

Mt. Pleasant, Tenn.—Drier.—Mt. Pleasant Drier Co. incorporated with \$10,000 capital stock by T. C. Meadows, C. H. Dempwolf, H. D. Ruhm, E. L. Gregory and others.

Nashville, Tenn.—Publishing.—Tennessee Company incorporated with \$25,000 capital stock by H. M. Suter, A. A. McCorkle, Luke Lea, J. A. Puryear, E. R. Richardson and others to publish a new daily paper. Currey Building has been leased and equipped with necessary machinery.

Nashville, Tenn.—Gas plant Improvements.—Nashville Gas Co. will enlarge present plant, improvements to include the erection of new retort-house and other facilities. D. S. Williams is president.

Newport, Tenn.—Cotton Mill.—C. F. Boyer has purchased the Bellevue Cotton Mills, exclusively a weaving plant, and is installing 5000 spindles, but will not operate the looms at present; will manufacture yarns. (Recently mentioned.)

Ripley, Tenn.—Street Improvements.—City has voted affirmatively the issuance of \$10,000 of bonds for graveling and improving streets. Address The Mayor. (Referred to February 21.)

Springfield, Tenn.—Road Improvements.—Robertson county has voted affirmatively the issuance of \$150,000 of bonds for road improvements. Address County Commissioners. (Referred to February 21.)

Winchester, Tenn.—Road Improvements.—Franklin county will vote March 28 on the \$180,000 road-improvement bonds referred to recently. Address County Clerk.

TEXAS.

Austin, Texas.—Creamery.—Pasteurizing Dairy Creamery Co., reported incorporated March 7 with \$15,000 capital stock, will operate creamery; capacity about 2000 gallons of milk daily. Building has been secured. Complete equipment for creamery and cold-storage plant will be wanted. J. B. Gasser is president and L. P. Wright secretary.

Austin, Texas.—Sawmill.—The Penitentiary System of the State of Texas is considering the erection of sawmill, but plans have not as yet been perfected. A. M. Barton is secretary Penitentiary Board.

Beaumont, Texas.—Cold-storage Plant.—Stedman Fruit Co. contemplates increasing capital stock by \$100,000. A building containing about 16,000 square feet of floor space has been leased and will be remodeled and equipped as cold-storage plant. About \$25,000 will be expended.

Beaumont, Texas.—Rice Mill.—Callahan & Graham have contract to build rice mill for the Beaumont Rice Mills mentioned February 23. The structure will be of steel frame and reinforced concrete, absolutely fireproof and equipped for a capacity of 1200 barrels of rice daily. D. J. Hayes is architect.

Canyon, Texas.—Light and Ice Plant.—Canyon City Light & Ice Co. incorporated with \$15,000 capital stock by L. C. Lair, D. A. Park, L. T. Lester, J. Frank Smith and others.

Cisco, Texas.—Furniture and Manufacturing.—Eppler Furniture & Manufacturing Co. incorporated with \$2000 capital stock by A. J. Ward, H. G. Eppler, George Langston and others.

Dallas, Texas.—Power Plant.—Contract has been awarded for the erection of \$20,000 power plant at the Baptist Memorial Sanitarium. Elevators are now being installed in the building, which is expected to be completed about August 1.—C. W. Bulger can be addressed.

Dallas, Texas.—Publishing.—South Publishing Co. incorporated with \$25,000 capital stock by Henry D. Lindsley, A. V. Lane, J. B. Dowell, O. D. Ford, J. H. Pickrell and others.

El Paso, Texas.—Publishing.—Herald-News Company has increased capital stock from \$80,000 to \$150,000. Company was reported February 28 as to erect a seven-story steel or concrete office building.

Fort Worth, Texas.—Macaroni Factory.—Fort Worth Macaroni Co. is having plans prepared for the erection of another story to its factory, containing 25,000 square feet of floor space, and will install additional machinery which will increase the output of its plant about 30 per cent.

Fort Worth, Texas.—Purifying Plants.—John W. Maxcy of Houston, Texas, who has been engaged in making experiments demonstrating the ability to purify the complex packing-house wastes emanating from the plants of Swift & Co. and Armour & Co. in North Fort Worth, has completed same and is now making final plans and estimates for a complete plant to cost \$500,000.

Fort Worth, Texas.—Amusement Company.—Lake Caddo Amusement Co. incorporated with \$50,000 capital stock by A. J. Anderson, Ben O. Smith, O. R. Menefee, J. H. Walk and W. O. Allen.

Fort Worth, Texas.—Cotton-oil Gln.—Henderson Cotton Oil Gln Co. has increased capital stock from \$40,000 to \$60,000.

Fort Worth, Texas.—Land Improvement.—Union Land Co. incorporated with \$10,000 capital stock by Walter B. Scott, W. D. Davis and L. L. Hawes.

Gainesville, Texas.—Cotton Gln.—Nelson Ginning Co. has been organized with \$30,000 capital stock by Ed. Nelson, J. C. Whaley, George E. N. Ball, E. P. Bomar, Val Peers and others; company will erect two new gins.

Galveston, Texas.—Sewerage System.—Contract will be let March 21 for the construction of vitrified sewers. John D. Kelley is city secretary and H. C. Lange commissioner of water-works and sewerage.

Graham, Texas.—Lumber.—Young County Lumber Co. incorporated with \$10,000 capital stock by D. J. Vick, W. T. Finch and A. W. Kay.

Hamlin, Texas.—Cottonseed-oil Mill.—Hamlin Oil & Cotton Co. will erect buildings; these and equipment to cost \$75,000; brick; capacity 80 tons per day; manager, W. B. Gultar, Abilene, Texas. (Mentioned last week.)

Henrietta, Texas.—Cottonseed-oil Mill.—Henrietta Cotton Oil Co., reported incorporated February 7, has contracted for the erection of cottonseed-oil mill.

Houston, Texas.—Iron Works.—Union Iron Works Co. has increased capital stock from \$75,000 to \$150,000. James Finnegan is manager.

Houston, Texas.—Water-works.—Bids will be received March 25 for erecting brick or concrete chimney and brick addition to water-works plant; Tom Bringhurst, City Secretary.

Lott, Texas.—Oil and Cotton.—Lott Oil & Cotton Co. incorporated with \$50,000 capital stock by George Roper, W. G. Nunn and J. J. Culbertson.

Mart, Texas.—Lumber Plant.—Mart Lumber Co. incorporated with \$25,000 capital stock by J. T. Davis, P. J. Owens and W. I. McReynolds, all of Waco, Texas.

Memphis, Texas.—Water-works.—City, it is reported, will expend \$23,000 constructing water-works. S. D. Miller, Amarillo, Texas, is consulting engineer.

Mexia, Texas.—Ice Plant.—Industrial Club is interested in plans for establishing ice plant to cost \$25,000 and has appointed a committee consisting of Joseph Nussbaum, Jack Womack and S. J. Jackson to close contracts.

Palestine, Texas.—Cotton Mill.—Britton Bros. of Dallas, Texas, have made proposition to organize \$125,000 company to build 5000-spindle cotton mill. They ask local investors to subscribe \$50,000.

Rule, Texas.—Cottonseed-oil Mill.—Rule Cotton Oil Co. incorporated with \$50,000 capital stock by K. L. Jones, Joe S. Lik, J. W. Kelley, S. M. Davis and others.

San Antonio, Texas.—Lumber Plant.—Wood Lumber Co. incorporated with \$25,000 capital stock by H. N. Wood, T. A. M. Dunlap and George Bolton.

San Marcos, Texas.—Cotton Compress.—Commercial Club is promoting the establishment of cotton compress costing about \$33,000, and has appointed committee with Mayor Porter as chairman to make necessary arrangements.

Somerville, Texas.—Cotton Gln.—Somerville Gln Co. incorporated with \$5000 capital stock by E. P. Reynolds, J. D. Giddings and A. A. Mullins.

Star, Texas.—Mill and Elevator.—Star Mill & Elevator Co. has increased capital stock from \$25,000 to \$50,000.

Sylvester, Texas.—Water Plant.—Sylvester Water Supply Co. incorporated with \$4000 capital stock by J. L. Polk, Jr., C. A. Struve, J. L. Compare, Robert Scott and J. W. Tune.

Temple, Texas.—Cotton-picking Machine Plant.—Ferriott Cotton Picking Machine Co. has been organized to manufacture a cotton-picking machine invented by C. L. Ferriott. E. F. Lanham is president of company, I. W. Culp vice-president, James Breen secretary and M. H. Cox treasurer.

Temple, Texas.—Candy Factory and Bottling Works.—Temple Candy & Bottling Co. is completing arrangements for the erection of factory building; two stories, of brick and stone.

Tyler, Texas.—Street Paving.—Omkander Bros. of Waco and Texarkana, Texas, have contract at about \$26,000 for paving around public square.

Tyler, Texas.—Garbage Crematory.—John H. Bonner, Mayor, will submit to Council on April 5 the necessity for establishing garbage crematory for 12,000 to 20,000 inhabitants. He invites information on the subject.

Waco, Texas.—Lumber Plant.—Owens Lumber Co. incorporated with \$50,000 capital stock by J. T. Davis, P. J. Owens and W. I. McReynolds.

Waco, Texas.—Public Improvements.—City has voted affirmatively the issuance of \$60,000 of sanitary-sewer bonds. A vote will be taken April 2 on \$20,000 permanent bridge and \$50,000 park bonds, previously mentioned. J. B. Baker is Mayor.

Waco, Texas.—Garbage Crematory.—City is considering installing garbage crematory. Address E. M. Byars, Alderman Fifth Ward, Drawer 29.

Winchell, Texas.—Water-works.—Winchell Water Works Co. incorporated with \$10,000 capital stock by L. W. Freddy, J. B. Hunter, J. D. Blacklock and others.

VIRGINIA.

Abingdon, Va.—Drug Company.—No-Ton-So Drug Co. incorporated with \$10,000 capital stock. W. V. Brichfield is president; W. J. Clement, Lynchburg, Va., vice-president; C. H. Jennings, treasurer, and J. L. Bradley, secretary, both of Abingdon.

Big Stone Gap, Va.—Coal and Timber Lands.—Rockhouse Realty Co., reported incorporated March 14, will buy and sell coal and timber lands. H. E. Fox is president and general manager.

Bristol, Va.—Mining.—Ackerson Creek Mining Co. incorporated with W. L. Umbarger president, W. E. Umbarger vice-president and S. V. Fulkerson secretary-treasurer.

Clifton Forge, Va.—Limestone Quarry.—Church Quarry & Mining Co., reported incorporated March 7 under Norfolk, Va., has acquired and will develop limestone property near Clifton Forge. It is proposed to install crushing outfit for ballast and fluxing, as well as kilns for burning lime. E. W. Church is president and George H. Frey secretary-treasurer; main office, Norfolk, Va.

Dayton, Va.—Creamery and Ice Plant.—Dayton Creamery & Ice Co. incorporated with \$15,000 capital stock; J. M. Cagney, president, and C. A. Funkhouser, vice-president.

Elkton, Va.—Sawmills.—M. M. Jarman & Co. have purchased 100 acres of timber land at Swift Run Gap and will cut lumber. They have stave mill now operating to be removed to new purchase; they also will locate a sawmill.

Gate City, Va.—Zinc Mines.—Reported that Patrick Hagan, R. F. Boatwright and associates have begun the development of zinc properties along Powell mountain in Scott county.

Gloucester, Va.—Manufacturing.—Incorporated: Tucker & Tallafarro Manufacturing Co., with \$5000 capital stock. H. L. Vaughan is president and W. C. Tucker secretary-treasurer.

Kimball, Va.—Flour Mill.—S. D. Beahm contemplates equipping his mill for producing buhr flour.

Luray, Va.—Knitting Mill.—Reported the Roanoke Knitting Mills, Roanoke, Va., will establish mill of 150 machines at Luray.

Lynchburg, Va.—Oil Press.—Kirschner Rotary Oil Press Corporation, reported chartered March 14 with \$25,000 capital stock, proposes to exploit new patent process for extracting oil, particularly cottonseed oil. No buildings will be erected at present. Fred Harper is president, M. Kirschner vice-president and Leon Goodman secretary-treasurer.

Martinsville, Va.—Knitting Mill.—Reported the Roanoke Knitting Mills, Roanoke, Va., will establish mill of 150 machines at Martinsville.

Norton, Va.—Coal Mines and Coke Ovens.—Bear Creek Coal & Coke Co. is arranging to develop coal and coke mining properties recently purchased. (Offices at Tacoma, Va.)

Norfolk, Va.—Land Improvement.—Incorporated: Murray View Co., with W. W. Dey,

president; H. E. Tabb, vice-president, and H. M. Murray, secretary-treasurer; capital stock, \$9000.

Norfolk, Va.—Land Improvement.—Chartered: Ballantine Realty Corporation with \$250,000 capital stock. J. W. Halstead is president.

Norfolk, Va.—Amusements, etc.—Crescent Amusement Co. incorporated with \$50,000 capital stock. A. G. Neville of Norfolk is president, C. K. Jacob vice-president and F. A. Chapman secretary, both of Wellsburg, W. Va.

Ottobine, Va.—Lime and Timber.—Wheelberger Rumsey Lime Co. incorporated with \$10,000 capital stock. E. S. Kircacofe is president, E. G. Wine vice-president and D. T. Fox secretary-treasurer.

Petersburg, Va.—Construction Company.—Harrison Construction Co. incorporated with \$25,000 authorized capital stock. Benjamin Harrison is president and J. N. Harrison secretary-treasurer.

Petersburg, Va.—Tannery.—United States Leather Co. is reported to rebuild on an enlarged scale plant recently burned; main offices, New York city.

Petersburg, Va.—Hydro-Electric Plant.—Nottoway Hydro-Electric Co., reported incorporated February 28, has commissioned Marcus R. Williams of Poplar Mount, Va., to prepare plans for dam, canal and power plant. It is proposed to develop water-power, transmitting same by electricity for light and power purposes. It is estimated that about \$150,000 will be expended.

Petersburg, Va.—Paving.—Sewers, Sidewalks and Water Mains Committee will let contract March 22 for laying 16,000 square yards granolithic sidewalk pavement; unfinished contract of Southern Contracting Co., Norfolk, Va. In addition contract will be let for 10,000 to 20,000 square yards granolithic sidewalk pavement. R. D. Budd is City Engineer.

Pulaski, Va.—Knitting Mill.—Roanoke Knitting Mills, Roanoke, Va., is reported as to establish at Pulaski a mill of 150 machines.

Pulaski, Va.—Electric-light Plant.—City will build plant for electric lighting, about \$75,000 to be expended. It will develop 1000 horse-power from water-power and generate electricity from the energy so obtained. A brick power-house will be erected. Engineer and architect in charge is H. S. Morrison, 18th and Dock streets, Richmond, Va. Jas. T. Loving is Mayor.

Richmond, Va.—Coal Mining, etc.—Stewart-Bryan Coal and Land Corporation incorporated with \$50,000 capital stock. Jos. Bryan is president, Jonathan Bryan vice-president and John Stewart Bryan secretary-treasurer.

Richmond, Va.—Forging Works.—Richmond Forging Corporation has increased capital stock from \$100,000 to \$200,000. It is proposed to make improvements to plant, install additional machinery, etc.

Richmond, Va.—Engineering and Supply Company.—American Engineering & Supply Co. incorporated with \$7000 capital stock with J. H. Chappell as president, V. D. Baccigalupo vice-president and C. L. Chappell secretary-treasurer.

Staunton, Va.—Fruit Growing.—Valley Farm and Orchard Corporation incorporated with \$10,000 capital stock. L. C. Young is president, E. S. Young vice-president and J. Yost secretary-treasurer.

St. Paul, Va.—Land Improvement.—St. Paul Land Co. incorporated with \$25,000 capital stock by J. N. Grear of St. Paul, M. S. and J. L. Kemmerer and W. E. Decker of Scranton, Pa.

Sugar Grove, Va.—Lead Mines.—Chamberlin Mineral Co., Washington, D. C., owning the Williams lead mine near Sugar Grove, has recently purchased an additional tract of land and will undertake extensive developments.

Waynesboro, Va.—Street Paving.—Town will vote on a \$10,000 bond issue for laying granolithic pavements. Address Town Clerk.

Williamsburg, Va.—Acetylene-gas Plant.—A. A. Umholtz, 1208½ N street, Washington, D. C., has contract to build acetylene-gas plant for city; building to be constructed of brick. About \$12,000 will be invested. (Previously referred to.)

WEST VIRGINIA.

Charleston, W. Va.—Coal Mines and Coke Ovens.—Slab Fork Coal Co. incorporated with \$200,000 capital stock by G. H. Caperton, Malcolm Jackson, S. P. Richmond, Angus McDonald and E. W. Knight.

Charleston, W. Va.—Oil and Gas Wells.—Miller Farm Oil & Gas Co. incorporated with \$20,000 capital stock to drill for oil and gas by John I. Clark, Morris Harmon, Val Fruth and George Fisher.

Charleston, W. Va.—Coal Lands.—Ritchie-Pocahontas Coal Land Co. incorporated with \$4,000,000 authorized capital stock by George E. Price, Harrison B. Smith, R. S. Spilman, Buckner Clay and Richard M. Price.

Charleston, W. Va.—Manufacturing.—Parker-Washington Company incorporated with \$60,000 capital stock by George Washington and Bushrod C. Washington of Charlestown, Foxhall A. Dangerfield, Lexington, Ky.; William H. Parker, Richmond, Va., and others.

Clarksburg, W. Va.—Glass Factory.—Tuna Glass Co. of Bradford, Pa., will establish plant for the manufacture of window glass; annual capacity 200,000 boxes. It is proposed to erect two buildings 115x200 feet and 75x120 feet, with wings 32x75 feet, 50x150 feet and 30x50 feet, office and several small buildings. About \$75,000 will be invested in building and equipment. Neither engineer nor architect have been selected. C. H. Harding is general manager at Bradford.

Elmo, W. Va.—Coal Mines.—Mars Branch Coal Co. incorporated with \$20,000 capital stock to operate the Cataract Colliery Co.'s mine at Whitney, W. Va.

Flemington, W. Va.—Paving-block Plant.—Max E. Johnson is reported as to establish a plant near Rosemont for manufacturing paving blocks for sidewalks. It is understood that the plant will be equipped with automatic machines, operated by natural gas, capable of producing 90,000 marbles daily, and with machinery for manufacturing stone pipes.

Glenrae (not a postoffice), W. Va.—Coal and Timber Development.—Commonwealth Lumber Co. of Alderson, W. Va., is arranging for the development of 5000 acres of coal and timber land near Glenrae; operations to begin April 1. E. L. Brown is president, G. W. French vice-president and J. H. West secretary-treasurer.

Hurricane, W. Va.—Flour Milling.—Shank Milling Co. incorporated with \$30,000 capital stock to manufacture flour and meal and deal in grain by A. C. Pinson, E. S. Juhling, W. A. Harris and others.

Keyser, W. Va.—Water-works.—City is considering the issuance of bonds for supplying South Keyser with water. Address The Mayor.

Lewisburg, W. Va.—Plumbing and Steamfitting.—Chas. A. Plunkett will engage in general plumbing and steamfitting and will need supplies.

Macdonald, W. Va.—Coal Mining.—The New River Company, operating extensive coal-mining and coke-manufacturing plants, will increase capital stock from \$9,000,000 to \$20,000,000.

Marshes, W. Va.—Telephone System.—Marshes Telephone Co. organized by John H. Poteet, Dr. G. P. Daniel, G. W. Callaway and others to construct telephone line from Marshes to Beckley and nearby towns. Geo. W. Willis, also interested in the company, will have charge of construction work.

Martinsburg, W. Va.—Limestone Lands.—Reported that Charles A. Matcham, president Fuller Engineering Co., Allentown, Pa., has purchased and will develop limestone properties.

Martinsburg, W. Va.—Cooperage Plant.—Berkeley Cooperage Co. incorporated to manufacture staves, heads, hoops, barrels, etc.

Parson, W. Va.—Woodworking Plant.—Parsons Excelsior Co. incorporated with \$10,000 capital stock by J. C. Myers, J. H. Anderson and A. B., G. N. and Viola Emery to manufacture excelsior, insulating pins, brackets, hubs, spokes, etc.

Pemberton, W. Va.—Coal Mines.—Pemberton Colliery Co. incorporated with \$15,000 capital stock to develop 1800 acres of coal lands in Raleigh county by F. E. Wallace, Mabscott, W. V. P. M. Snyder, Mt. Hope, W. Va.; Prince E. Lilly, Blue Jay, W. Va., and others.

Point Pleasant, W. Va.—Publishing.—Point Pleasant Publishing Co. incorporated with \$50,000 capital stock by O. B. Harper, Ebner Dawson, Dr. Hugh A. Barbee, L. S. Echols, all of Point Pleasant, and Geo. N. Capehart of New Haven, W. Va.

Wheeling, W. Va.—Gas Wells, etc.—Modern Development Co. incorporated with \$50,000 capital stock to drill for gas and mine various kinds of minerals by T. B. Auber, Frank Auber, R. K. Fair, A. B. Imhoff and others.

Whitney Station (not a postoffice), W. Va.—Coal Mines and Coke Ovens.—Mars Branch Coal Co. incorporated with \$20,000 capital stock by John B. Jones and A. A. Robson of Charleston; W. F. Boone, Boone, W. Va., and James D. and J. A. Boone of Fayette, W. Va.

Williamson, W. Va.—Brick Plant.—Peerless Brick Co. incorporated with \$25,000 capital

stock by A. C. Pinson, E. S. Juhling, W. A. Harris and others.

Williamstown, W. Va.—Shoe Plant.—Marletta Shoe Co. incorporated with \$25,000 capital stock by George Hunter, W. C. Thomas, W. P. Beeson and J. A. Griffith, all of Williamstown, and W. E. Roe of Pittsburg, Pa.

INDIAN TERRITORY.

Bartlesville, I. T.—Street Paving.—R. S. Gillilan, Iola, Kan., has contract to pave seven blocks in business district.

Chickasha, I. T.—Cottonseed-oil Mill.—Chickasha Cotton Oil Co. of Chickasha and Norman, O. T., incorporated with \$100,000 capital stock by R. K. Wooten of Chickasha, E. B. Johnson and C. H. Bessant of Norman, O. T.; R. K. Wooten, Jr., of Oklahoma City, O. T., and others.

Tulsa, I. T.—Paving.—City has awarded contract at about \$127,000 to the Cleveland Trinidad Paving Co., Cleveland, Ohio, for paving 23 blocks with asphalt; work to be completed within 200 days. (Referred to January 17.)

OKLAHOMA TERRITORY.

Cleveland, O. T.—Oil Wells.—Home Oil Co. incorporated with \$25,000 capital stock by William Blake, Louis F. Blake and Benj. F. Kennedy.

Dutton, O. T.—Oil and Gas Wells.—Dutton Oil & Gas Co. incorporated with \$100,000 capital stock by R. L. Stansberry, W. H. Curlee and L. W. Frain of Dutton, W. G. Williams of El Reno, O. T., and others.

Frederick, O. T.—Cottonseed-oil Plant.—Frederick Cotton Oil & Manufacturing Co. incorporated with \$100,000 capital stock by W. E. Weathers, A. Lair, W. S. Peters, T. F. Spurgeon and others.

Lawton, O. T.—Water-works, Sewers, Street Paving, etc.—City has voted \$260,000 of bonds for water-works, sewers, street improvements, etc.; this proposition previously referred to and classified as follows: \$30,000 for water-works extensions, \$20,000 for sanitary sewers, \$10,000 for street grading, \$40,000 for sewer extensions, etc. No pumping station will be required, as a dam site has been selected in the mountains to form a reservoir, the daily supply of 10,000,000 gallons being contemplated. Address The Mayor.

Lawton, O. T.—Telephone System.—Sulphur Springs Rural Telephone Co. incorporated by H. O. Miller, L. T. Dawes, F. H. Beasley and others.

Longdale, O. T.—Telephone System.—Dane & Longdale Telephone Co. incorporated by C. M. Richards, A. G. Brewer, H. H. Lowden, C. G. Sickles, A. M. Ardrey and others.

Oklahoma City, O. T.—Cottonseed Mill.—Arrangements have been completed for proposed cotton-oil mill, recently reported; six presses; equipped with modern machinery; G. H. Henson, 330 Broad street, Chattanooga, Tenn., president.

Oklahoma City, O. T.—Brick Plant.—Oklahoma Vitrified & Pressed Brick Co. will establish plant for the manufacture of paving, sidewalk, pressed and common building brick; capacity 60,000 to 100,000 daily; steam-power; Chas. A. Hoshour, president and general manager. (Recently reported incorporated.)

Oklahoma City, O. T.—Cotton Mill.—Bissell & Bissell represent Eastern capitalists who propose building a cotton mill of 6000 spindles and complement of looms to represent an investment of about \$100,000.

Pawnee, O. T.—Oil Wells.—Hanna Oil Co. of Pawnee and Tulsa, I. T., incorporated with \$40,000 capital stock by G. L. Wheeler of Pawnee, A. V. Davenport and Robert B. Williamson of Tulsa, I. T.

Warwick, O. T.—Cotton-oil Mill and Cotton Gins.—Warwick Cotton Products Co. incorporated with \$100,000 capital stock by J. W. Stonebreaker, Henry Rausha, J. I. Messner, H. W. Preuss and others.

Woodward, O. T.—Cold-storage Plant.—Woodward Cold Storage Co. incorporated with \$100,000 capital stock by B. W. Key, A. M. Appelget, B. F. McKay, E. B. Roll and Frank R. French.

Yale, O. T.—Cannery.—Yale Canning Co., reported incorporated last week, will operate cannery with a daily capacity of 20,000 cans. A two-story building, 28x55 feet, will be erected. G. W. Canfield is president and J. F. Jerome secretary.

BURNED.

Alcolu, S. C.—D. W. Alderson & Sons Company's shingle mill.

Brinson, Ga.—Stuart Lumber Co.'s dry-kilns; loss \$75,000.

Cerro Gordo, N. C.—Williamson & Brown Land & Lumber Co.'s sawmill and dust-house; loss \$25,000.

Elberton, Ga.—Elberton Oil Mills' warehouse; loss \$20,000.

Enfield, N. C.—Enfield Knitting Mills; loss reported as \$40,000.

Fordyce, Ark.—Fordyce Lumber Co.'s four steam drykilns; loss \$40,000 to \$60,000.

Lexington, Ky.—Calvary Baptist Church; loss \$50,000; W. P. Hines, pastor.

New Martinsville, W. Va.—New Martinsville Glass Co.'s plant; loss \$125,000.

Newport News, Va.—Barton's Theater and annex to Hotel Warwick.

Sherman, Texas.—Sherman High School building; loss \$30,000. Address The Mayor.

Tunnelton, W. Va.—Tunnelton Bank, A. J. Bonafide, president; loss about \$100,000.

Urbanna, Va.—L. Wagner's packing and canning factory; loss \$4000.

BUILDING NOTES.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Amarillo, Texas.—Church.—Baptist church will erect edifice at a cost of about \$25,000. Address The Pastor.

Amarillo, Texas.—Church.—First Christian Church will erect edifice costing \$30,000. Address The Pastor.

Amelia, Va.—Bank Building.—Farmers & Merchants' Bank, J. G. Jefferson, president, will erect bank building.

Anderson, S. C.—Library Building.—Mulkey & Davis have contract at \$13,083 for erecting proposed Carnegie library building.

Ashburn, Ga.—Courthouse.—Contract will be let April 6 for courthouse previously reported to be erected by Turner county at a cost of \$40,000. P. E. Dennis and Alexander Blair, Macon, Ga., prepared the plans.

Asheville, N. C.—Sanitarium.—Asheville-Biltmore Sanitarium Co. incorporated with \$50,000 capital stock by Paul Paquin, M.D., J. W. Brunson, Jr., and F. Roberts Grout.

Asheville, N. C.—Jail Building.—County Commissioners of Buncombe county will consider plans for erecting a new \$40,000 jail building, with subway to courthouse.

Athens, Ga.—Office Building.—Miles & Bratt, Atlanta, Ga., have contract to erect building for Southern Mutual Insurance Co. (Referred to February 7.)

Augusta, Ga.—Church.—A. J. Little has contract to make improvements to Asbury M. E. Church. About \$6000 will be expended.

Baltimore, Md.—Warehouse.—McGaw & Droman, 304 Light street, have awarded contract to Charles L. Stockhausen, Marine Bank Building, Gay and Water streets, for the erection of four-story warehouse at Charles and Perry streets; structure to be 18x60 feet.

Baltimore, Md.—Sub-postoffice and Apartments.—Estimates have been submitted by Brady & Watters, 532 St. Paul street; Chalk & Himes, 36 West Preston street; Willard E. Harn, Oakdale and Roland avenues, Roland Park; Henry H. Gelst, 413 West King street, and John Cowan, 106 West Madison street, for the erection of building near Druid Hill and North avenues for John S. Bridges, 28 South Charles street; structure will be two stories high, 22x58 feet; first floor to be fitted for postoffice and second floor for residential purposes; steam heat, electric lights, etc.; cost about \$20,000. George Norbury Mackenzie third, architect, 30 Builders' Exchange Building.

Baltimore, Md.—Dwellings.—Charles H. Gerwig, Cromwell and 22d streets, will erect seven three-story dwellings on the west side of Auchentoroly terrace north of Orem Park place; cost about \$40,000.

Baltimore, Md.—Bank Building.—The Calvert Bank, Howard and Saratoga streets, will erect an addition to its bank building after plans by J. E. Sperry, architect, Calvert Building, Fayette and St. Paul streets.

Baltimore, Md.—Warehouses.—Clarence E. Anderson, architect, Law Building, 25 Courtland street, is preparing plans for four-story warehouse, 25x65 feet, to be erected at 514 Light street for George F. Obrecht, 514 Light street, and for three two-story brick warehouses to be erected on Perry, near Light street, for Charles F. Obrecht, 1419 South Charles street.

Baltimore, Md.—Church.—The P. E. Church of the Epiphany, Carroll E. Harding, rector, 142 North Broadway, will erect new church building at corner Arlington and Ready avenues; two stories, 35x74 feet; stone exterior; lighting and heating systems. C. L. Stockhausen, National Marine Bank Building; Willis & Mason, 324 West Biddle street; John E. Marshall & Son, 121 Mercer street;

John Cowan, 106 West Madison street, and H. S. Rippel, 7 Clay street, are estimating on construction; Hugh S. Magruder, architect, 11 East Pleasant street.

Baltimore, Md.—Dwellings.—Oldenburg & Kelly, 15 East Lombard street, will erect 20 two-story brick dwellings on 11th street near Lombard, to cost about \$36,000.

Baltimore, Md.—Cottage.—Henry J. Tinley, architect, Hoffman Building, 11 East Lexington street, has prepared plans and specifications for the erection of two-and-one-half-story cottage at Bancroft road and Davis avenue for W. C. Scott. Structure will occupy site 32x37 feet and contain 11 rooms; electric lights; gas fixtures; steam heat; tile finish in bathrooms and parquet flooring on first floor; two porches on three sides and large porch in rear; estimates to be invited.

Baltimore, Md.—Dwelling.—J. Y. Brattan, 319 East 23d street, has commissioned McLaughlin Bros., 100 East Lexington street, to prepare plans and specifications for three-story residence at southeast corner St. Paul boulevard and 32d street; structure to have front of garage brick.

Baltimore, Md.—School.—St. Benedict's Catholic Church, Wilkens avenue near Millington avenue, has commissioned Tormey & Leach, architects, 323 North Charles street, to prepare plans and specifications for the erection of school hall in connection with the church; structure will be three stories high with front of brick and stone.

Baltimore, Md.—Nursery.—St. Martin's Catholic Church has awarded contract to Melver & Piel, 29 Builders' Exchange Building, for the erection of day nursery at Payette and Payson streets. Structure will be two stories high, 40x40 feet, of brick construction, and equipped with modern conveniences; cost about \$5000; Thomas C. Kennedy, architect, 516 Law Building.

Baltimore, Md.—Dwellings.—W. L. Westphal, Curley street and Fairmount avenue, will erect 26 two-story dwellings on the east and west sides of North Chapel street between Lanvale street and Lafayette avenue; cost about \$30,000; Samuel A. Bersterman, architect, 1438 North Eden street.

Baltimore, Md.—Dwelling.—Joseph Bowes, 230 Equitable Building, has awarded contract to Gladfelter & Chambers, 2072 Woodberry avenue, for the construction of his proposed dwelling at Roland Park; two and one-half stories high; brick and frame construction; electric wiring and fixtures; sanitary plumbing; heating system; Bayard Turnbull, architect, 12 East Lexington street.

Baltimore, Md.—Chapel and Hall.—T. George Carroll, architect, 1209 Continental Trust Building, has distributed plans and specifications for the erection of chapel and hall building for the Oblate Sisters of Providence at Chase street and Forest place; structure will be two stories high, 35x100 feet; base of Woodstock granite and superstructure of brick with Indiana limestone trimmings. A priests' house is also contemplated, and alternate bids are being asked for the chapel and hall and for the priests' house. Estimating are Edward Brady & Sons, 1109 Cathedral street; John Stack & Sons, 250 West Preston street; Patton Construction Co.; David M. Andrew Company, Light and Balderston streets; Moylan & Welsh, 115 East Center street; Henry L. Maas, 906 Alquist street, and the Charles J. Cassidy Co., 523 13th street N. W., Washington, D. C.; bids to be submitted March 19.

Baltimore, Md.—Dwellings.—J. Wilson Scott, 1303 East North avenue, has awarded contract to William J. E. Diven, 204 North Payson street, for the erection of 14 two-story dwellings on the east side of Payson street between Presbury street and Liberty road; cost about \$17,000; Stanislaus Russell, architect, Clifton avenue and 8th street. (Referred to last week.)

Baltimore, Md.—Guildhouse.—Fayette Street Methodist Episcopal Church has awarded contract to Israel Griffith, 43 Builders' Exchange Building, for the erection of guildhouse at 753 West Fayette street; structure will be three stories high, 18x100 feet, and will cost about \$10,000; Archer & Allen, architects, Central Savings Bank Building.

Baltimore, Md.—School.—City has acquired site on Lakewood avenue and Philadelphia road, adjoining school No. 83, to which an addition will probably be erected; lot is about 150x150 feet. Address School Commissioners, Madison and Lafayette avenues.

Baltimore, Md.—Dwellings.—Edw. Helms, 1908 Light street, has commissioned J. C. Spedden, architect, to prepare plans for the erection of two two-story dwellings at 2100 and 2102 Hanover street; one structure to be 17x68 feet, with storeroom on first floor, gas and electric-light fixtures; other structure to be 15x63 feet; aggregate cost about \$5300.

Baltimore, Md.—Carbarn.—Simonson & Pietsch, architects, American Building, South and Baltimore streets, are preparing plans and specifications for carbarn to be erected on the Harford road, near Smith's lane, for the Maryland Electric Railways Co., to be sub-leased to the United Railways & Electric Co. (Previously referred to.)

Baltimore, Md.—Engine-houses and Schools. City will vote May 7 on \$1,000,000 for the erection and equipment of engine-houses and \$1,000,000 for the erection and equipment of schoolhouses. Address Finance Commissioner, City Hall.

Baltimore, Md.—Warehouse.—Albert H. Wehr, 528 Law Building, has purchased site at Welcome alley and Light street from Alexander Yearly, trustee, 5 Builders' Exchange Building, which will be used for the erection of warehouse; lot has a frontage of 30 feet, with a depth of 160 feet.

Baltimore, Md.—Dwelling.—Mrs. Mary Morris has purchased from Hollins McKim, 1101 North Calvert street, a lot of ground on the west side of Calvert street, north of Preston street, with a frontage of 40 feet and depth of 132 feet, upon which, it is understood, a modern residence will be erected.

Baltimore, Md.—Apartment-house.—Henry J. Tinley, architect, has distributed plans and specifications for the erection of four-story apartment-house at Fayette and Stockton streets for Dr. J. A. Evans and Dr. H. J. Evans, 101 North Carey street; structure will be 65x81 feet; finished basement; roof garden; brick fronts with Indiana limestone trimmings; electric and gas fixtures; steam heat; first floor and stair hall to be fireproof; eight apartments; granite steps at outside entrance with brass railings. Estimating are R. H. Frazier & Son, 230 St. Paul street; William Batton, Park Heights avenue, near Third avenue; Harry H. Brown, 109 Clay street; Thomas P. Johns, 405 McCulloh street; James F. Farley, 43 Franklin Building, North and Baltimore streets, and Henry S. Rippel, 7 Clay street; bids to be submitted March 21.

Baltimore, Md.—Dwelling.—Charles E. Cassell & Son, 822 Law Building, have distributed plans for the erection of proposed dwelling on Park Heights avenue for Chas. E. Ford. Among those estimating are Willis & Mason, 324 West Biddle street and Monmonier & Sorrel, 308 Laurens street.

Baltimore, Md.—Dwelling.—Professor Warner has awarded contract to E. E. Tobe, 2816 Evergreen Terrace, for the construction of residence on Park Heights avenue. George Clothier, Jr., architect, 11 East Lexington street.

Baltimore, Md.—Dwellings.—Mrs. Mary Mylander, 511 North Carrollton avenue, has awarded contract to A. C. Mylander, contractor, Law Building, for the erection of 16 two-story dwellings 15x55 feet at Payson and Lexington streets; brick with marble trimmings; tin roof; furnace heat; cost about \$32,000. Jacob F. Gerwig, architect, 11 East Lexington street.

Baltimore, Md.—Dwelling.—Mrs. Charlotte Kraus has purchased lot at Walbrook from the Walbrook Land Corporation, Equitable Building, and will probably erect dwelling.

Bartlesville, I. T.—Business Block.—John O. Taylor is reported to erect business block.

Bartlesville, I. T.—Business Block.—W. T. Berents has had plans prepared for business block to cost \$15,000.

Bartlesville, I. T.—Opera-house and Office Building.—J. L. Overles has contracted for the erection of \$20,000 opera-house, also for constructing office building to cost \$20,000.

Beaumont, Texas.—Building.—George Caswell has awarded contract to M. A. McKnight for erection of one-story brick building with plate-glass front for the Caswell estate, to be occupied by Andrus Park Grocery Co.; building to be erected on rectangular lot 54x112x30 feet and equipped with refrigerating machinery and other facilities.

Berkeley, W. Va.—Courthouse.—Berkeley county is considering plans for renovating courthouse, expending about \$10,000. Address County Commissioners.

Birmingham, Ala.—Dwelling.—H. A. Parker, care of Penny Savings Bank, is having plans prepared by W. Chamberlin & Co., Chalfoux Building, for residence.

Birmingham, Ala.—Hotel.—W. Chamberlin & Co., Chalfoux Building, are preparing plans for hotel.

Birmingham, Ala.—Office Building.—W. Chamberlin & Co., Chalfoux Building, are preparing plans for office building to be erected by Mrs. McCoy.

Birmingham, Ala.—Apartment Building.—Richard W. Massey will erect apartment-house costing between \$100,000 and \$125,000 on site 100x132 feet, recently purchased; structure will be built in form of letter H,

five stories high, of brick, stone and terra-cotta, contain 24 apartments and equipped with passenger and freight elevators, telephone service, hot and cold water, gas and electric plants, etc.; corridors will be finished in white Alabama marble and corridor floors will be of marble. William C. Weston prepared plans.

Birmingham, Ala.—Store Building.—Evans Bros. Construction Co. has contract to erect store building for Wimberly & Thomas Hardware Co.; four stories, 140x250 feet; cost completed \$150,000.

Blum, Texas.—School Building.—Trustees of the Blum Independent School District have adopted plans by T. J. Galbraith of Hillsboro, Texas, for the erection of \$10,000 school building recently referred to. As soon as working plans can be completed bids will be advertised for and construction work will probably begin about May 1.

Booneville, Ark.—School Building.—Bids will be opened March 25 for construction of two-story brick school building costing \$20,000, mentioned January 31. Address The Mayor.

Bowling Green, Ky.—Custom-house.—City is arranging to build a \$100,000 custom-house. Address The Mayor.

Brunswick, Ga.—Courthouse and Jail Building.—Glynn county will vote April 18 on the issuance of \$75,000 of bonds, \$50,000 to be used for completing and furnishing new courthouse and \$25,000 for erecting and equipping jail building. Address County Commissioners.

Brunswick, Ga.—Wharves.—Frank D. Aiken will rebuild crosstie wharves recently reported burned; buildings and equipment to cost \$8000. The wharves will not be rebuilt.

Camden, Tenn.—School Building.—City contemplates issuing \$10,000 of bonds to erect school building. Address The Mayor.

Ceredo, W. Va.—School Building.—E. N. Alger, Huntington, W. Va., has submitted plans for school building, for which \$15,000 of bonds have been voted.

Charleston, S. C.—Police Station.—J. T. Snelson Contracting Co. is lowest bidder at \$56,558 and will probably be awarded contract to erect police station previously mentioned.

Charlotte, N. C.—Church.—First Baptist Church will erect a fireproof building to cost \$50,000; 68x78 feet; direct steam heat; electric and gas lighting; date for opening bids not yet fixed; architect, J. M. McMichael.

Chattanooga, Tenn.—Buildings.—Chas. D. Gordon will erect seven two-story brick buildings at a cost of \$15,000.

Chattanooga, Tenn.—Hotel.—Rock excavations have been about completed for Hotel Patten, previously reported as to be erected, and are ready for steel superstructure; building to be 11 stories high, 170x120 feet; cost to be about \$500,000. George Baker Long, Chattanooga, has contract for entire work, including mechanical equipment, and W. T. Downing of Atlanta, Ga., is the architect.

Chattanooga, Tenn.—Office Building.—It is the intention to proceed to carry out all the original plans for the C. E. James office building, previously detailed; building to be 12 stories high; fireproof structure; steel and terra-cotta; George A. Fuller Construction Co., Chattanooga, contractor in charge.

Chickamauga, Ga.—Residence.—Gordon Lee is having plans prepared by Adams & Alsop of Chattanooga, Tenn., for improvements to residence, expending \$10,000. New heating, lighting and water plants will be installed.

Childersburg, Ala.—Building.—Report recently mooted that Hall & Stokes of Dadeville, Ala., had contract for erecting Childersburg Realty & Manufacturing Co. building was not correct.

Columbia, S. C.—Residence.—Vincent will erect dwelling.

Columbus, Miss.—Roller-skating Rink.—Columbus Roller Skating Rink Association incorporated with \$10,000 capital stock by Warren M. Cox, G. T. Heard and others of Columbus, Lewis E. Crook and F. A. Kemper of Meridian, Miss.

Cornerville, Tenn.—Office Building.—Cornerville Telephone Co. will erect a two-story office building.

Dadeville, Ala.—Dwelling.—Andrew McIntosh will build dwelling costing \$2500 after plans and specifications by Hall Bros.

DeFuniak Springs, Fla.—School Building.—Solomon-Norcross Company and Hall-Ilges Company, associate engineers, 1622 Candler Building, Atlanta, Ga., have been appointed engineers in charge of construction of \$10,000 school building. Dr. G. P. Henry is Mayor.

DeFuniak Springs, Fla.—School Building.—W. T. McCormick, Arcadia, Fla., is pre-

paring plans for school building, for the erection of which \$10,000 of bonds were reported March 7 voted.

Easton, Md.—Bank Building.—Tormey & Leach, 323 North Charles street, Baltimore, Md., have been commissioned to prepare plans for bank building reported February 28 to be erected by the Talbot Savings Bank; one story, 36x60 feet; dome center; fireproof construction; steam heat; electric and gas fixtures; cost \$15,000.

Ensley, Ala.—Bank Building.—Bank of Alabama contemplates the erection of bank building. R. F. Smith is president.

Franklin, La.—School Building.—City has voted a 2½-mill 10-year tax for the erection of a two-story brick school building costing \$50,000. Address The Mayor.

Fitzgerald, Ga.—Building.—M. Buice is completing arrangements for erecting three-story press brick building; cost \$20,000.

Fitzgerald, Ga.—Courthouse and Jail Building.—Ben Hill county has purchased site for the erection of courthouse and jail. Address for further information C. M. Wise, ordinary, or W. R. Bowen, W. R. Walker and H. M. Warren, commissioners.

Fitzgerald, Ga.—Depot.—Arrangements will be made at once by the Atlanta, Birmingham & Atlantic Railway, George D. Wadley, general manager, Atlanta, Ga., for the erection of proposed three-story brick depot; cost \$50,000.

Fort Worth, Texas.—Office Building.—A. T. Byers will erect a 10-story office building.

Franklin, La.—Courthouse.—F. B. Hull Construction Co., Jackson, Miss., has been awarded contract to furnish plans and build courthouse for St. Mary's parish; the building to have concrete foundations, floors reinforced with steel, granite basement, pressed-brick walls with terra-cotta trimmings, copper cornice, slate roof, interior finish of hardwood, with marble wainscot and terrazo floors; cost \$115,000.

Frederick, Md.—Opera-house.—Orlando Johnson, Toledo, Ohio, will prepare plans for remodeling City Opera-House at a cost of \$18,000.

Gadsden, Ala.—Business Building.—Phillips-Neely Mercantile Co. will soon award contract for the erection of a two-story brick building.

Gainesville, Ga.—Church.—Baptist congregation is having plans prepared by Bruce & Everett, 706 English-American Building, Atlanta, Ga., for \$35,000 edifice; brick and stone; steam heat; electric fixtures, etc.

Gainesville, Ga.—Depot.—Grandy & Jordan, Greenville, S. C., have contract to erect proposed depot for the Southern Railway.

Galveston, Texas.—Hotel.—S. Cohn will have plans prepared for three-story frame hotel, 65x120 feet, containing 100 rooms, each 14x14 feet, at a cost of \$17,000.

Galveston, Texas.—Hotel.—Chas. F. Schelewa, 3508 Avenue S, has contract to erect hotel for the Seaside Hotel Co., H. W. D. Langston, president, 25th and Q streets; four stories, 61x130 feet; frame; ordinary construction; electric fixtures; cost \$22,000. D. N. McKenzie prepared the plans. (Referred to recently.)

Glasgow, Ky.—School Building.—Wilbur Moss has contract at \$13,000 to repair the Glasgow Graded School, work to be completed by August 1.

Grafton, W. Va.—Residence and Office Building.—Giesey & Faris, Wheeling, W. Va., have submitted plans and specifications for brick-and-stone residence and office building to be erected by J. George Preiss and occupied by Dr. R. H. Powell.

Greensboro, N. C.—School Building.—City has voted affirmatively the issuance of \$30,000 of bonds for the erection of school building mentioned January 24. T. J. Murphy is Mayor.

Greenville, S. C.—Depot.—Southern Railway is reported as completing arrangements for erection of new freight depot and an addition to present freight building, expending about \$15,000. D. W. Lum, Washington, D. C., is chief engineer.

Gulfport, Miss.—Railway Dock.—Gulfport & Northwestern Railroad Co. is ready to receive bids for erection of its proposed dock.

Gulfport, Miss.—Jail Building.—City has awarded contract to F. B. Hull Construction Co., Jackson, Miss., at \$10,875 for erection of proposed jail building, referred to February 28. Address The Mayor.

Hattiesburg, Miss.—Store and Office Building.—Major Allan of Llano, Texas, has purchased site on which it is stated a store and office building will be erected.

Hopkinsville, Ky.—Building.—J. F. Garnett will erect a three-story building.

Hot Springs, Ark.—School Building.—

School Board has awarded contract at \$103,000 to Clark & Thallman of Little Rock, Ark., for the erection of high-school building; to M. J. Murphy at \$4598 for plumbing, and to J. W. Millmine at \$5025 for heating plant to be installed in structure. (Referred to February 21.)

Hopkinsville, Ky.—Department Store.—J. H. Anderson & Co. will erect a modern department store, for which Architect Thompson of Nashville, Tenn., is preparing plans.

Houma, La.—School Building.—City has appropriated \$10,000 for the erection of high-school building. Address The Mayor.

Huntington, W. Va.—Apartment-house.—George N. Biggs is having plans prepared by J. B. Stewart for apartment-house to be erected at a cost of \$17,000.

Jackson, Tenn.—Warehouse.—Farmers' Union of Madison county will build a cotton warehouse with a capacity of about 3500 bales.

Jacksonville, Fla.—Hotel.—E. L. Stevenson is considering addition to the Park Hotel.

Jeanerette, La.—Church.—Catholic congregation will erect a new edifice. Address Rev. Father Bardy.

Kansas City, Mo.—Association Building.—Plans and specifications are being completed by C. A. Smith for superstructure for proposed Y. M. C. A. building, and bids for construction will shortly be asked. The building will be seven stories. Foundation work has been completed.

Kaufman, Texas.—Bank Building.—First National Bank will erect \$25,000 building. H. T. Nash is president.

Key West, Fla.—Store Building.—Monroe Investment Co. will let contract for building 38x110 feet to be erected for T. E. Reedy.

Kinston, N. C.—Bank and Office Building.—Bank of Kinston has purchased site 50x80 feet on which to erect a four-story pressed-brick bank and office building to cost \$25,000. R. C. Strong is cashier.

Lafayette, La.—School Building.—City has awarded contract for school building; brick; two stories and basement; ordinary construction; steam heating; electric lighting; cost \$56,000. Bids were opened March 8. Materials have been purchased and delivery has begun; W. C. Whitney, Beaumont, Texas, contractor; C. H. Page, Austin, Texas, architect; Chas. O. Monton, Mayor. (Mentioned recently.)

Lafayette, La.—Opera-house.—R. E. Hawkins is reported to erect opera-house with a seating capacity of 1000.

Lake Charles, La.—Opera-house.—W. C. Brandt and Cagney & Christman contemplate building an opera-house to cost about \$30,000.

Lane, S. C.—Hotel.—Lane Hotel Co. is reported to erect \$4000 hotel.

Laredo, Texas.—School Building.—City will vote on the issuance of \$45,000 school building bonds. Address The Mayor.

Laurel, Miss.—Building.—Denham Bros. have let contract to W. M. Norris for erection of two-story brick dwelling 37x120 feet costing \$7300.

Lawton, O. T.—Business Block.—J. R. Gilham and C. C. Farnmonds will erect business block costing \$20,000.

Lawton, O. T.—Business Building.—A. Lowinger will build brick business structure costing \$20,000.

Lawton, O. T.—Business Building.—J. J. Folk awarded contract for erection of brick business building costing \$20,000.

Lawton, O. T.—Residence.—Charles W. Payne has plans for erection of residence costing \$35,000.

Lawton, O. T.—Residence.—Mrs. S. L. Pegham has awarded contract for erection of residence costing \$8000.

Lawton, O. T.—Store Building.—Benbow-Horton Hardware Co. accepted plans for construction of four-story brick building to cost \$60,000.

Lexington, Ky.—Hotel.—Bids will be received until April 5 by Richards, McCarthy & Bulford, Ruggery Building, Columbus, Ohio for 250-room hotel for the Phoenix Hotel Co.; cost \$300,000.

Lineville, Ala.—Bank Building.—Citizens' National Bank, organized with Dr. S. J. Gay, president, will erect building.

Little Rock, Ark.—Convent Building.—Sisters of Mercy will build convent 100x200 feet; four stories high; ordinary construction; steam-heating plant; electric-lighting fixtures; electric elevators; boilers; bids to be opened April 1. Charles L. Thompson, architect. (Reported recently.)

Louisville, Ky.—Apartment Building.—Plans by J. F. Shebley have been completed for apartment building to be erected by Morris Cohen and Meyer Cohen, costing between

\$75,000 and \$80,000; three stories, each floor containing four apartments of eight rooms each; outside walls faced with gray brick and stone; bathrooms to be wainscoted and supplied with tile floors; apartment furnished throughout with art glass; hardwood floors; main entrance lined with polished Italian marble, to be used also on main stairway in hall; colonial style of architecture. Gnaou & Alt are general contractors.

Louisville, Ky.—School Building.—Contract will be let about April 1 for building reported recently to be erected by the Louisville Industrial School; two stories and basement; brick with stone trimmings; ordinary fireproof construction; cost completed \$20,000. A. C. Curtin is architect. John H. Leathers is president.

Lumberton, N. C.—Residence.—A. W. McLean will erect a \$20,000 residence; J. M. McMichael, Charlotte, N. C., architect.

Madill, I. T.—Masonic Temple.—Reported that a three-story Masonic Temple 50x150 feet will be erected at a cost of \$25,000. Address secretary local lodge of Masons.

Marion, Va.—Residence.—J. C. Campbell will erect dwelling costing \$20,000.

Marshall, Texas.—City Hall.—City Secretary will receive bids until March 27 for the erection of City Hall. All bids for building proper must be accompanied by a certified check for \$1000 payable to H. S. Rice, City Secretary. Separate bids will be received for the plumbing, heating and electric wiring of building at the same time and place, said bids to be accompanied by a certified check for 10 per cent. of amount of bid; plans and specifications on file at office of Lang & Wittichell, architects, Dallas, Texas; C. G. Lancaster, architect, Marshall, and at office of City Secretary, Marshall; usual rights reserved.

Mart, Texas.—Store and Office Building.—Bids are being received for the erection of a two-story store and office building for Mart Drug Co.; also on one-story building for Dr. Gillam; plans on file at office of Brooks Pearson, architect, 105½ South 5th street, Waco, Texas.

Maryville, Mo.—School Building.—Board of regents will arrange for erection of the new Northwest Normal School building, for which the Legislature has appropriated \$302,000. Building will be located on 116 acres of land and \$235,000 will be expended for main building and heating plant. Mr. Deerwester is president.

McGregor, Texas.—Bank and Office Building.—Bids will be received at office of Lang & Wittichell, architects, 622 Wilson Building, Dallas, Texas, until March 18 for the erection of a two-story bank and office building for the First National Bank; plans and specifications on file in office of architects and at the First National Bank, McGregor; usual rights reserved.

Memphis, Tenn.—Hotel.—James A. McKim Company, Chicago, Ill., has contract to remodel and enlarge the Peabody Hotel at a cost of \$500,000. (Award mentioned last week not correct.)

Millan, Tenn.—School Building.—City has voted affirmatively the issuance of \$15,000 of bonds to erect school building. (Referred to February 7.) Address The Mayor.

Mobile, Ala.—Church.—St. Joseph's Catholic congregation is reported to erect edifice doubling the capacity of present church. Address The Pastor.

Mobile, Ala.—Hotel.—Jos. B. Webster, general manager of the Bienville Brewery, will erect a four-story brick hotel and has engaged Rudolph Benz & Sons to prepare plans and specifications.

Montgomery, W. Va.—Opera House.—M. J. Simms and Dr. J. J. Henderson will erect a \$20,000 pressed-brick opera house.

Nashville, Tenn.—Jail Building.—Jail Building Committee, W. G. M. Campbell, chairman, has approved plans submitted by Wheeler, Runge & Dickey of Charlotte, N. C., for proposed \$110,000 jail building. Bids will soon be opened.

Nashville, Ark.—Hotel.—P. D. Whatley, Junction, Ark., will build a two-story brick hotel, 75x125 feet, containing about 40 rooms.

New Iberia, La.—Church.—Methodist Church has accepted plans by E. W. Phillips and will open bids for rebuilding edifice burned last January.

New Iberia, La.—Theater and Lodge Building.—Stone Bros. of New Orleans, La., will prepare plans and specifications for three-story home and theater to be erected by local lodge B. P. O. E.

Newport News, Va.—Hotel.—E. Morgan has contract to erect hotel for the Hotel Annex Corporation after plans by A. T. Moore; building to be rectangular, 131x76x35 feet; ordinary construction, with plaster boards

used instead of laths and platen; electric fixtures; cost \$13,000.

New Orleans, La.—Building.—Mrs. Agnes Lowrie O'Donnell will erect a four-story concrete building to be used as storeroom and warehouse and be equipped for the manufacture of soda water and other beverages.

Oklahoma City, O. T.—Building.—J. W. Lucas has contract at \$18,000 to erect the Baptist Orphans' Home referred to January 24. Main hall will be located on a 40-acre tract and be 36x68 feet, three stories and basement, built of native brick, finished with Carthage and Silvertown limestone, and surrounded by cottages; Turbyfill & Mohr, architects.

Oklahoma City, O. T.—Bank and Office Building.—Thomas Campbell is having plans prepared by Starr & Chestney, 219 Baltimore Building, for six-story bank and office building 55x140 feet; cost \$25,000.

New Orleans, La.—Residences.—Mrs. H. Well will erect two double two-story frame residences costing \$15,000.

New Orleans, La.—Hotel.—John Henry, Hennen Building, is completing plans for annex to be built to the Bruno Hotel, and bids for the construction will shortly be asked; structure to be three stories, 110x128 feet; steel and concrete with pressed-brick exterior.

Norfolk, Va.—Hotel.—Virginian Hotel incorporated with \$18,000 authorized capital stock. A. L. Black is president; S. W. Kelly vice-president and general manager and C. V. Cooke secretary-treasurer.

Oklahoma City, O. T.—Building.—Hawk & Colignon are preparing plans for building to be erected by W. F. Wright and F. P. Johnson; four stories, 41x70 feet; ordinary fireproof construction; steam heat; electric fixtures; cost \$12,000.

Orange, Texas.—Store Building.—Plans and specifications have been prepared by H. C. Banker and bids will be received for two-story brick building to be erected by Aaronson Bros.

Paint Creek, W. Va.—Hospital.—Higgins & Hirst of Moundsville, W. Va., have received contract for concrete work on the 150x50-foot addition to be built to the Sheltering Arms Hospital at a cost of \$60,000.

Palestine, Texas.—Sanitarium.—Palestine Sanitarium incorporated with \$10,000 capital stock by E. W. Link, R. H. McLeod, W. G. Jameson, A. L. Hathcock and others.

Paris, Texas.—Hospital.—Plans and specifications will be considered by the city April 15 for constructing addition and renovating an old hospital. About \$15,000 will be expended. Ed. H. McGulston is Mayor.

Pascagoula, Miss.—Hotel.—Scranton-Pascagoula Realty Co. contemplates building hotel.

Pensacola, Fla.—Church.—First M. E. Church will erect edifice to cost about \$75,000; stone, 72x175 feet; tile roof; quartered-oak finish; art glass; church furniture; ordinary construction; steam heating plant; electric-lighting fixtures; electric wiring; to be erected by day labor; Badgley & Nicholas, architects, 6110 Euclid avenue, Cleveland.

Pensacola, Fla.—Jail Building.—City has awarded contract at \$24,786 to S. F. Fulghum & Co. for erection of two-story brick police station and city jail.

Ohio; A. M. McMillan, secretary of building committee. (Mentioned recently.)

Pikeville, Tenn.—Courthouse.—Contract will be let March 28 for the erection of courthouse; concrete fireproof construction. W. Chamberlin & Co., Chalfoux Building, Birmingham, Ala., prepared the plans. J. B. Vaughn is secretary building committee.

Port Arthur, Texas.—Building.—F. D. Nagel has contract to erect building for George Wignall after plans by C. H. Page, Austin, Texas; 50x140 feet; fireproof construction; electric fixtures; freight elevator; cost \$15,000.

Port Arthur, Texas.—Business Building.—Fred Drunagel has contract to construct brick building 50x140 feet for W. C. Tyrrell after plans by C. H. Page of Austin, Texas.

Prospect, Tenn.—Church.—W. B. Silliman, Pulaski, Tenn., has contract to erect edifice for the Methodist congregation; brick and stone; cost \$5,000.

Raleigh, N. C.—Building.—It is reported that M. M. Smith will erect three-story building.

Richmond, Va.—Greenhouses.—Ratcliffe, Tanner & McKenna, who recently purchased site, 250x150 feet, have begun the erection of a number of hothouses costing between \$4,000 and \$60,000.

San Antonio, Texas.—Hotel.—San Antonio Hotel Co., recently reported incorporated, will erect 10-story hotel at a cost of about \$1,000,000, equipped with all modern improvements. L. J. Hart is president of company,

George M. Maverick vice-president, Lewis Maverick secretary and William Negley treasurer.

San Antonio, Texas.—Apartment-house.—Robert and Augustus Maverick have purchased site with a frontage of 56 feet at \$17,200 on which to erect an apartment-house.

San Antonio, Texas.—Apartment-house.—Alfred Giles is preparing plans for apartment-house to be erected by T. H. Anderson; three stories; press brick with stone trimmings; cost \$40,000.

Savannah, Ga.—Apartment Buildings.—T. P. Waring will erect two two-story frame, metal-roof apartment-houses, containing four flats, and equipped with all modern improvements, at a cost of \$9000. Percy Sugden is architect.

Shelbyville, Ky.—Building.—Building Committee Home for Aged and Infirm Masons of Kentucky has adopted plans prepared by Lynn T. Gruber for three-story home; 100x130 feet; 75 apartments; cost \$40,000.

Shreveport, La.—Freight Warehouse.—Reported that the Vicksburg, Shreveport & Pacific Railway will erect freight warehouse. D. D. Curran, New Orleans, La., is general manager.

Snyder, O. T.—Building.—Stofer Mercantile Co. will erect a two-story brick building 50x140 feet.

Social Circle, Ga.—Church.—Bruce & Everett, 706 English-American Building, Atlanta, Ga., are preparing plans for improvements to be made to Methodist Church at a cost of \$6000.

Somerset, Ky.—Office Building and Telephone Exchange.—Gainesboro Telephone Co. will erect a three-story brick office building for the Somerset exchange.

Somerset, Ky.—Church.—Baptist Church has had plans prepared for new \$15,000 edifice. Rev. O. M. Huey is pastor.

Spartanburg, S. C.—Dwellings.—J. T. Harris will erect 52 four-room cottages at a cost of \$15,000.

St. Joseph, Mo.—Business Building.—Block Bros. are having plans prepared by Meler, Hartman & Meler, 51-52 Bollinger Building, for four-story building; 49x160 feet, of brick; gas and electric fixtures.

St. Joseph, Mo.—Hotel.—Buchanan Hotel Co., Milton Tootle, Jr., president, has had plans prepared by Eames & Young of St. Louis and E. J. Eckel, St. Joseph, associated architects, for six or eight story hotel building costing about \$300,000.

St. Louis, Mo.—Apartment Building.—Lucerne Realty & Building Co., Fred Banister, president, will erect a three-story apartment building to cost about \$150,000.

St. Louis, Mo.—Office Building.—Lauran Realty Co. will erect an eight-story office building costing \$225,000.

St. Louis, Mo.—Postoffice.—E. L. Wagner Construction Co. has contract to erect branch postoffice after plans by F. C. Bon-sack.

St. Louis, Mo.—Apartment-houses.—D. Criss has purchased site 150x125 feet on which to erect six buildings containing four and five room flats.

St. Louis, Mo.—Residence.—Harold M. Kaufman will erect \$22,000 residence. Mar-ner & LaBeaume prepared plans.

Surry, Va.—Courthouse.—Bids will be received until April 4 at the office of A. S. Edwards, clerk, for constructing courthouse for Surry county according to drawings and specifications prepared by G. R. Berryman, Jr., architect, copies of which may be had on application. Bids must conform to requirements of specifications; usual rights reserved.

Taylor, Texas.—Cotton Warehouse.—It is proposed to build a cotton warehouse. R. L. McFarlin, president of a local farmers' union, is interested.

Tocon, Ga.—Courthouse.—B. P. Brown, Jr., ordinary, will receive bids until April 9 for building, equipping and completing courthouse for Stephens county; two stories; 92x73 feet; fireproof construction. Plans and specifications on file in ordinary's office; also in office of H. L. Lewman, architect, Louisville, Ky.; certified check for \$1000, payable to B. P. Brown, Jr., ordinary, must accompany each bid.

Tulsa, I. T.—Bank and Office Building.—Central National Banking Co. is having plans prepared by Starr & Chestney, 219 Baltimore Building, Oklahoma City, O. T., for five-story bank and office building 50x100 feet; cost \$55,000.

Tunnelton, W. Va.—Bank Building.—A. J. Bonafield will erect bank building and office to replace building recently reported burned; 40x60 feet; three stories; brick; fireproof; steam heating; electric lighting; cost not yet decided.

Tuscaloosa, Ala.—Courthouse.—Commissioners of Tuscaloosa county have adopted plans by W. E. Spink, Birmingham, Ala., for new courthouse.

Waco, Texas.—School Building.—City will vote April 2 on the issuance of \$50,000 of school-building bonds, previously mentioned. J. B. Baker is Mayor.

Washington, D. C.—Hall.—Columbia Turnverein, 7th and L streets, will organize the Columbia Turnverein Building Association for the purpose of erecting new building to cost about \$60,000.

Washington, D. C.—Dwelling.—Louis Beyer, Jr., 1418 F street N. W., has purchased site on Clifton street, Columbia Heights, from Stone & Fairfax, 1342 New York avenue N. W., and will erect residence.

Washington, D. C.—Dwelling.—Mrs. A. C. Harney, 2306 Sheridan Circle N. W., contemplates the erection of large residence on R street near Sheridan Circle, Kalorama Heights.

Washington, D. C.—Hall and School.—Rev. J. A. Matthew, St. Cyprian's parish, has secured permit for the erection of three-story hall and school on C street, between 12th and 13th streets S. E.; Julius Wenig, architect, 1223 F street N. W.; Charles J. Cassidy Company, contractors, 523 13th street N. W.; cost about \$18,000.

Washington, D. C.—Dwelling.—James L. Karkick, 1320 New York avenue N. W., has had plans prepared for the erection of three-story brick dwelling at 2130 Bancroft place. Structure will be fireproof, with roof garden; Italian garden in rear and modern garage building on extreme back of lot; Beecher, Friz & Gregg, architects, 11 East Pleasant street, Baltimore, Md.; cost about \$25,000.

Washington, D. C.—Dwellings.—Alexander Miller, 1215 Ohio avenue N. W., will erect five three-story brick dwellings at 15 to 23 Bryant street; cost about \$21,500.

Washington, D. C.—Dwellings.—J. E. Briggs, 408 6th street S. E., will erect three two-story brick dwellings at 635 to 642 South Carolina avenue S. E.; A. M. Poynton, architect, 911 French street N. W.; R. C. Hess, builder, 115 Tennessee avenue N. E.; cost about \$11,000.

Washington, D. C.—Fraternity Home.—Kappa Sigma fraternity will arrange for the erection of national Kappa Sigma fraternity house to cost \$100,000. H. D. Fry, 1909 Q street N. W., will appoint a committee of seven members to plan securing the funds.

Washington, D. C.—Dwelling.—E. C. Goodwin, The Imperial, has secured permit for the erection of three-story brick dwelling at 1855 Kalorama road; A. H. Sonneman, architect, 1413 G street N. W.; Kennedy & Davis, builders, 1413 G street N. W.; cost about \$10,000.

Washington, D. C.—Dwellings.—Isaac H. Bryant, 3525 11th street N. W., has secured permit for the erection of three two-story brick dwellings at 502 to 506 Randolph street; N. T. Haller Company, architects, 212 Corcoran Building; George C. Hough, builder, 619 14th street N. W.; cost about \$10,500.

Washington, D. C.—Carriage-house and Stable.—George E. Huff, 1335 16th street N. W., has secured permit for the erection of carriage-house and stable at 1804 Corcoran street N. W.; Newman & Smith, contractors, Colorado Building; Horace Trumbauer, architect; cost about \$15,000.

Waycross, Ga.—Hotel.—J. D. Smith, Birmingham, Ala., has had plans prepared for the erection of six-story building, to be constructed of steel, stone and brick and absolutely fireproof.

Wheeling, W. Va.—Business Building.—Cooley-Bentz Company will erect a four-story brick business building costing \$9000, to be equipped with elevator and modern improvements.

Wheeling, W. Va.—Business Building.—Bids are now being received for the erection of a two-story modern frame business building 67x65 feet for John H. Davidson, in accordance with plans by C. D. McCarthy; structure will contain 3200 feet of floor space and cost \$12,000. An electric-lighting plant, furnishing power for ice cream factory, will be installed.

Wheeling, W. Va.—Building.—Sisters, Home of the Good Shepherd, Edgington Lane, will erect additional three-story brick building costing \$25,000, to be equipped with steam laundry, etc.

Williamson, W. Va.—Dwelling.—Wells Goodykoonts will let contract April 1 for two-story residence, for which plans have been prepared by J. B. Stewart, Huntington, W. Va.

Williamson, W. Va.—Dwelling.—James Jamson has had plans prepared by J. B.

Stewart, Huntington, W. Va., for two-story residence 35x55 feet.

Wise, Va.—School Building.—City contemplating erecting school building costing about \$25,000. Address The Mayor.

Woodstock, Va.—School Building.—City will erect school building costing about \$12,000. Address The Mayor.

RAILROAD CONSTRUCTION.

Railways.

Abbeville, Ga.—Survey has been completed for the Abbeville & Northwestern Railway from Abbeville to Fort Valley with an extension from a point near Unadilla to Montezuma. The line also reaches Pineview, Finleyson and Emerich.

Americus, Ga.—Reported that the Western & Gulf Railway Co. will shortly let contracts for 51 miles of construction from Americus to Byromville and Unadilla. G. D. Allen is chief engineer at Americus, Ga., and Crawford Wheatley is president; entire line to be 85 miles long, from Dawson to Hawkinsville, Ga.

Athens, Ga.—It is proposed to build a railroad from Athens, Ga., via Hartwell to Anderson, S. C., 60 miles. Among those interested are W. L. Hodges of Hartwell, Ga., and Mayor Dorsey, A. H. Hodgson, W. D. O'Farrell, J. C. Cooper, H. J. Rowe, J. N. Webb, C. J. O'Farrell, G. H. Hulme, James White, Y. J. Morton, C. B. Griffith, M. G. Michael, J. Y. Carlters and Judge G. C. Thomas of Athens.

Beeville, Texas.—Col. I. T. Pryor of San Antonio and others are pushing plans to build the proposed railroad from Beeville to Spofford. The line will run through seven counties.

Bessemer, Ala.—The Mobile & Ohio Railroad will, it is reported, be extended from Blocton via Bessemer and Ensley to Birmingham. C. F. Blue is superintendent of way and structures at St. Louis, Mo.

Birmingham, Ala.—The Birmingham Belt Line proposes to build an extension of about two miles. A. J. Sams is superintendent at Birmingham.

Canton, N. C.—The contract for the Pigeon River Railway of the Champion Fiber Co. is reported let to Yandle Bros. Line will be 16 miles long from Canton to Sunburst, N. C.

Chattanooga, Tenn.—Reported that the Tidewater Development Co. of Alabama, which is to build a line connecting Gadsden, Birmingham and Tuscaloosa, will also build a line to Chattanooga, Tenn. J. M. Dewberry of Birmingham, Ala., is president.

Chattanooga, Tenn.—The Southern Railway, it is reported, has purchased land to build a change of line into Chattanooga. W. H. Wells is engineer of construction at Washington, D. C.

Corsicana, Texas.—The Manufacturers' Record is informed that survey has been completed for the Corsicana & Palestine Interurban Railway and construction is expected to begin soon.

Due West, S. C.—The Due West & Donalds Railroad Co. has been organized for the branch four miles long between Due West and Donalds on the Southern Railway. R. S. Galloway is president and treasurer, M. B. Clingscales is vice-president and R. S. Galloway is acting secretary. Construction is under way. W. O. Willard of Liberty, S. C., having the contract. T. C. Anderson of Greenville, S. C., is engineer.

Durham, N. C.—A small amount of construction has been done at Raleigh, N. C., on the proposed line of the Raleigh & Durham Passenger & Power Co., this to preserve the franchise. The road must be completed and in operation by March 3, 1910. Jones Fuller of Durham is interested and Thomas S. Fuller of Raleigh, the latter being secretary and treasurer.

Eurine, La.—On the extension of the Louisiana Western Railway from Eunice to Mamou, La., 17 miles, eight miles are graded and track-laying has begun. The contractor is Joseph McSweeney of Eunice, La.

Gainesville, Fla.—The American Construction Co. is building the extensions of the Gainesville & Gulf Railway, to be known as the Tampa & Jacksonville Railway. Sub-contracts are to be let, it is reported, on April 2. C. N. Atkinson is general manager at Gainesville, Fla. Survey has been made from Jacksonville to York, Fla., 100 miles, and survey is being completed to Tampa. Among the points touched are Kingsley Lake, Starke, Gainesville, Micanopy, Fairfield, York and Lecanto. Grading is reported complete from Fairfield south to York, five miles, and is in progress for five miles beyond York. W. H. Jones, H. Ganto, E. L. Anderson and R. Cheeseboro are at work on this.

Glasgow, Mo.—The Missouri Central Railway Co., which proposes to build a line across the State of Missouri from St. Louis to Kansas City, has elected officers as follows: George B. Harrison, president; P. K. Givens of Fayette, vice-president; E. W. Price of Keytesville, treasurer; Howard Ellis, New Florence, secretary; W. B. Cawthorn, engineer. St. Louis capitalists, it is reported, propose to finance the line.

Golden City, Mo.—The Oklahoma & Golden City Railroad Co. is a new project which proposes to build a line from Jefferson City, Mo., to Pawhuska, O. T., 270 miles, with a branch from Climax Springs to Springfield, Mo., 60 miles. Among other places touched are Humansville, Stockton, Carthage, Joplin, Urbana and Buffalo. Reported that a construction contract has been let to a Kansas City concern.

Gulf, N. C.—F. D. Jones, superintendent of the Durham & Charlotte Railroad, is reported as saying that construction will soon be completed as far as Troy. After that construction will begin from the other end of the line to Durham, N. C.

Greenville, S. C.—Reported that work will begin in about two months on the proposed electric railway from Greenville to Williamson. Those interested as incorporators are S. A. Anderson, W. F. Neal, O. K. Mauldin, A. A. Gates and H. H. Prince.

Helena, Ark.—Business organizations of Helena propose to build a railroad from Helena to Webb. The F. S. Mordaunt Railroad & Municipal Construction Co. of Chicago is investigating the project.

Interior, Va.—The charter of the Big Stony Railway, which is controlled by the Norfolk & Western, has been amended and an extension will be built from Interior to Potts Valley, 20 miles. C. S. Churchill is chief engineer of the Norfolk & Western at Roanoke, Va.

Keokee, Lee County, Va.—The Keokee Coal & Coke Co. is reported to have let contract to Johnston & Grommett Bros. for building a branch line of railroad.

Lake Charles, La.—Reported that the Lake Charles & Northern Railroad has let a contract to build 22 miles of line from Lake Charles to Fulton, where it will connect with the Louisiana Pacific Railway. Callaghan & Graham of Beaumont, Texas, are the contractors. G. S. Nott of New Orleans is president of the road and E. B. Cushing is vice-president, the latter being a Southern Pacific officer.

Little Rock, Ark.—Reported that the Allis-Chalmers Company and the Electrical Installation Co. of Chicago have made a proposition to build the proposed electric railway from Little Rock to Hot Springs. The Little Rock people interested include T. H. Bunch, George W. Rogers, T. H. Dalhoff, C. J. Kramer and Mayor W. E. Lenon. Over \$30,000 has been subscribed to build the road, and other subscriptions are being secured. The name of the company is the Little Rock & Hot Springs Electric Railway Co., 321 Main street. L. Garrett and J. T. Rust are promoting the line.

Memphis, Tenn.—The Illinois Central Railroad is reported to have let a contract to H. C. Hodges & Son of Birmingham, Ala., for excavating 700,000 yards of earth in grading on the seven-mile line around Memphis.

Mobile, Ala.—The Mississippi Central Railroad, it is reported, is contemplating building an extension to Mobile provided it is given free terminals. The matter is now before the Commercial Club. M. H. McCabe is superintendent of the railroad at Hattiesburg, Miss.

Mount Sterling, Ky.—The Paris & Mount Sterling Interurban Co. is reported to have received a proposition from Chicago capitalists to finance the proposed electric railway to cost, with equipment, \$500,000.

Nashville, Tenn.—D. A. Proctor, chief engineer, has begun survey for the proposed Nashville & Columbia Interurban Railway which has been projected by President H. H. Mayberry and others. Patrick Hirsch is contractor.

New Iberia, La.—At a meeting of the special committees appointed to consider the proposed railroad from New Iberia to Port Barre a general committee was appointed on the subject as follows: Board of Trade, Jules Dreyfus, R. S. McMahon, P. R. Burke; Police Jury, A. B. Romero, Leon Lemaire, Norbert Blanchett; City Council, G. C. Laughlin, Louis Indest and George W. Dallas.

Norfolk, Va.—The Elizabeth River Railroad Co. will hold a special meeting on March 26 to consider a proposition to extend its line and to make improvements besides, amending its charter for the issue of preferred stock. E. A. Buell, J. W. Wilcox and others are interested. Construction is reported un-

der way on the company's belt line, about seven miles long, work to be completed in April. The contractor is the Pinkerton Construction Co., Land Title Building, Philadelphia, Pa., and Charles H. Peddle, 138 South 4th street, Philadelphia, is chief engineer.

Oklahoma City, O. T.—The Colorado, Oklahoma & Gulf Railroad Co. has been chartered to build a line 300 miles long from Arapaho, O. T., via Ardmore, to Sherman, Texas. The incorporators are William E. Hedges of the Columbia Bank & Trust Co., Oklahoma City; Hon. John Allen and J. Q. Robins of Tupelo, Miss.; W. M. Cox of Baldwin, Miss., and C. W. Young of Memphis, Tenn.

Onley, Va.—A company has been organized to build the proposed electric railway to connect Onancock, Onley, Tasley and Accomac, and also a branch from Onley to Wachapreague. T. W. Taylor of Onancock presided at the meeting, with Chas. R. Waters of Onley as secretary. Officers of the company were elected as follows: Spencer F. Rogers, president; Joseph S. Bell, treasurer; T. W. Taylor, secretary; directors, C. C. Long, Thomas S. Hopkins, Jas. N. Fletcher, Jr., John W. Edmonds, Dr. Ira N. Ayres, A. N. G. Mears, Dr. John W. Kellam, A. J. McMath, John W. Rogers, O. L. Parker, John S. Waples, R. L. Hopkins, N. W. Nock and E. J. Belonte. B. K. Gunter, Howard K. Powell and James N. Fletcher, Jr., were appointed a committee to secure the charter.

Pascagoula, Miss.—Reported that half a mile of land on the east bank of the Pascagoula river has been transferred to the Birmingham & Southwestern Railway Co., represented by Will A. Aarons of Hattiesburg, Miss.

Port Arthur, Texas.—L. F. Loree, chairman of the executive committee of the Kansas City Southern Railroad, is reported as saying that he would recommend expending \$250,000 for terminal improvements at Port Arthur. A. F. Rust is chief engineer at Kansas City, Mo.

Raleigh, N. C.—The Seaboard Air Line Railway has made a survey about seven miles long for a detour line for freight service around Raleigh. It has also made surveys to reduce grades all along the line from Norfolk, Va., to Hamlet, N. C. W. L. Seddon is chief engineer at Norfolk.

Rusk, Texas.—A. M. Barton, secretary of the Texas State Penitentiary Board, informs the Manufacturers' Record that the State railroad, when completed, will be about 26 miles long from the International & Great Northern Railroad eastward to the Texas & New Orleans Railroad, crossing the St. Louis Southwestern Railway at Rusk, about eight miles from the Texas & New Orleans Railroad.

Springfield, Ga.—The Brinson Railway will, it is reported, have its line sufficiently completed to operate trains by April 1. Charles Nevill is reported to have been elected vice-president. George M. Brinson is president.

Stonega, Va.—The Interstate Railroad is reported to have let a contract for the proposed extension from Blackwood to Norton; headquarters at Stonega.

Sykesville, Md.—The managers of Springfield Hospital have decided to prepare plans and specifications to build the proposed railroad from a connection with the Baltimore & Ohio at Sykesville to the hospital, about two miles. Dr. J. Clement Clark is superintendent.

Tampa, Fla.—The Tampa & West Coast Railway Co. has been incorporated by J. N. Holmes, C. B. Ware and J. Craig Phillips to build the proposed railway from Tampa and West Tampa to Clearwater and St. Petersburg, Fla., about 40 miles; capital \$300,000.

Waycross, Ga.—Isaac Smith of Baltimore is reported to be making a survey for the proposed Waycross, Baxley & Vidalia Railway. Dr. W. H. Buchanan is secretary and treasurer. George W. Dean and others are also interested.

Waycross, Ga.—Reported that application will be made to charter the Chattanooga, Waycross & Jacksonville Railroad Co. to build a line from Waycross to Macon, Ga., about 130 miles. Those interested are John M. Cox, Dan Lott, J. S. Williams, S. W. Hitch, S. M. Sweat, G. P. Folks, M. L. Moore, W. W. Sharpe, W. B. Ellington, W. E. Sirmans, James Knox and Darren Lott, all of Waycross.

Street Railways.

Asheville, N. C.—Construction has begun on the proposed line of the Asheville Rapid Transit Co.

Chattanooga, Tenn.—The Chattanooga Railways Co. is reported to be considering plans to build another electric railway to the summit of Lookout Mountain.

Grafton, W. Va.—John T. McGraw, presi-

dent of the City Traction Co., has, it is reported, been authorized to employ superintendents and workmen to begin construction of the proposed street railway.

Greensboro, N. C.—Reported that construction has begun on the new street railroad from the Southern Railway station to Glenwood, Piedmont Heights and other points in West Greensboro.

Huntsville, Ala.—The Huntsville Railway, Light & Power Co. proposes to build an extension.

Laurens, S. C.—The Manufacturers' Record is informed that the Laurens City Council has granted to N. B. Dial of Laurens a franchise to build a street railway.

Macon, Ga.—The Macon Railway & Light Co., it is reported, will extend the East Macon Line from Tattal Square to the three-mile post on Columbus road.

Oklahoma City, O. T.—Reported that J. J. Culbertson, W. F. Harn and others will shortly apply for a franchise to build a street railway from the business center to the suburbs northeast of the city.

Raleigh, N. C.—The Raleigh Electric Co. has ordered 70-pound rails and some of its lines are to be reconstructed.

Somerset, Ky.—The Street Railway Co. is reported to have completed its line to Ferguson, a suburb.

MACHINERY, PROPOSALS AND SUPPLIES WANTED.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.

Agricultural Machinery.—Donan Bank, No. 3 Technische Abtheilung, Belgrade, Servia, wants catalogues, prices and discounts on agricultural machinery.

Boiler.—Temple Candy & Bottling Works, Temple, Texas, wants 80-horse-power boiler. (See "Engine and Boiler.")

Boiler.—Pasteurizing Dairy Creamery Co., J. B. Gasser, president, Austin, Texas, wants 40-horse-power boiler. (See "Engine and Boiler.")

Boiler.—Box D, Fayetteville, N. C., wants second-hand horizontal tubular boiler, 150 or 200 horse-power, latter preferred; must be in good condition and carry a pressure of 115 to 120 pounds and pass inspection of the Hartford Steam Boiler Insurance Co.

Boiler.—See "Engine and Boiler."

Boiler.—Box D, Fayetteville, N. C., wants second-hand horizontal tubular boiler, 150 or 200 horse-power, latter preferred; good condition; pressure 115 to 120 pounds; must pass Hartford inspection.

Boiler.—Stuttgart Rice Mill Co., Stuttgart, Ark., will probably want 125-horse-power boiler.

Boiler.—M. M. Jarman & Co., Elkton, Va., will consider prices on 20, 25 or 30-horse-power boiler at low price.

Boilers.—Lonaconing Electric Light & Power Co., Lonaconing, Md., wants prices on boilers.

Boilers.—See "Water-works Equipment."

Bottle-washing and Labeling Machine.—Charles Noel Water Co., St. Louis, Mo., will purchase bottle-washing and labeling machine.

Brick Machinery.—J. L. Tallafarro, 209 North 29th street, Richmond, Va., wants outfit for stiff mud brickmaking, about 25,000 daily; auger machine, disintegrator pug.

Brick Plant.—Chas. A. Hoshour, general manager Oklahoma Vitriol & Pressed Brick Co., Oklahoma City, O. T., wants prices on machinery for brick plant; also on steam-power for same; capacity 60,000 to 100,000 daily.

Bridge.—Sealed proposals will be received at office of treasurer, Southern Branch, N. H. D. V. S., National Soldiers' Home, Elizabeth City county, Virginia, until April 3 for furnishing material and labor for constructing bridge across Jones creek in accordance with instructions and specifications, copies

of which, with blank proposals and other information, may be had upon application to B. A. Beeson, treasurer.

Building Supplies.—J. A. Peterman, chairman Courthouse Building Committee, Franklin, La., will receive bids until March 25 for 300 yards shells suitable for making concrete, 300 yards clean gravel for concrete work, 300 yards cinders for concrete work, 700,000 merchantable brick, 140,000 press brick, 900 barrels Portland cement, 1000 barrels lime, 500 barrels hydraulic cement, equal to Howard or Magnolia cement (all Portland cement must stand a tensile strain of 300 pounds per square inch after 24 hours exposure to the air), 1000 yards coarse sand; all material to be delivered f. o. b. at Southern Pacific depot or on courthouse site in Franklin, La.

Building Materials.—R. O. Campbell Coal Co., 10 Decatur street, Atlanta, Ga., wants quotations on lime, cement, plaster, laths, shingles and all kinds of building materials.

Cannery Equipment.—R. Byrd Leeper, Unionville, Ill., wants equipment for small cannery for farm purposes.

Chain and Sprockets.—W. A. Carver, Rougemont, N. C., wants prices on sprocket wheels and chain to bear 500 to 600 pounds strain.

Collar Pads.—Norfolk Bagging Co., 614 Citizens' Bank Building, Norfolk, Va., wants addresses of manufacturers of collar pads for horses.

Concrete Work.—Bids will be received April 10 by Board of Water Commissioners, Park Woodward, general manager, for furnishing material and constructing coagulating basin and clear-water basin at Water-Works Pumping Station No. 2 on Southern Belt Railroad. Proposals will be received for furnishing material and constructing these basins of concrete, contractors to make all excavations. Plans and specifications will be furnished bidders on application. Proposals will also be received for furnishing material and erecting basins of reinforced concrete, bidders to furnish plans and specifications and state guarantee on same. All bids subject to bond election to be held April 9; usual rights reserved.

Creamery.—Pasteurizing Dairy Creamery Co., J. B. Gasser, president, Austin, Texas, wants pasteurizing machine, capacity 3500 gallons per hour; large-size butter washer; large-size butter boiler and complete equipment for creamery.

Crematory.—John H. Bonner, Mayor, Tyler, Texas, wants addresses of manufacturers and erectors of garbage crematories.

Crusher.—Catawba Real Estate Co., Inc., J. M. Cherry, president, Rock Hill, S. C., wants a stone crusher.

Drill.—L. F. Hobbs, Box 483, Norfolk, Va., wants Cyclone drill complete, 1½ to 3-inch hole; second-hand; good order.

Drying Plant.—San Antonio Paste Works, No. 255 Washington street, San Antonio, Texas, wants information regarding drying systems for macaroni factory.

Dumbwaiter.—F. J. Tansey, Cumberland, Md., wants dumbwaiter.

Electric-light Plant.—E. A. Sneed, president City Council, Clifton Forge, Va., will receive bids until April 8 for constructing electric-lighting system.

Electric Wiring.—See Building Note under Marshall, Texas.

Electrical Equipment.—South River Milling Co., R. F. D. No. 1, Salisbury, N. C., wants information regarding motors for attaching to water-power for lighting mill and a dozen dwellings.

Electrical Equipment.—See "Silver-plating Equipment."

Engine.—Abbeville Electric Light, Water & Power Co., Abbeville, Ga., wants 100 to 125 horse-power Atlas engine.

Engine.—See "Traction Engine."

Engine.—Joseph H. Thompson, Jr., 17 Battery Place, New York, wants an 80 to 150 horse-power second-hand Corliss engine.

Engine.—Hanver & Sellars, Atkinson, N. C., wants a new or second-hand 20 or 25 horse-power gasoline engine, with propeller and all equipment complete.

Engine.—Catawba Real Estate Co., Inc., J. M. Cherry, president, Rock Hill, S. C., will purchase gasoline engine.

Engine.—Kilwan-Roberts Supply Co., 409 Exchange place, Baltimore, Md., wants prices on second-hand traction engine.

Engine and Boiler.—Toccoa Furniture Co., W. C. Edwards, Toccoa, Ga., wants engine and boiler, 125 to 150-horse-power, for quick delivery.

Engine and Boiler.—Temple Candy & Bottling Works, Temple, Texas, wants 25-horse-power engine and 80-horse-power boiler.

Engine and Boiler.—Pasteurizing Dairy Creamery Co., J. B. Gasser, president, Aus-

tin, Texas, wants 20-horse-power engine and 40-horse-power boiler.

Engine and Boiler.—Stuttgart Rice Mill Co., Stuttgart, Ark., will probably want 125-horse-power boiler and 100-horse-power Corliss engine.

Excelsior Machinery.—H. B. Bigham, 1109-1111 English-American Building, Atlanta, Ga., wants catalogues and price lists of excelsior machinery.

Excelsior Machinery.—George P. Howard, P. O. Box 317, Atlanta, Ga., wants addresses of manufacturers of excelsior machinery.

Filter Plant.—Bids will be received April 10 by Board of Water Commissioners, Park Woodward, general manager, Atlanta, Ga., for furnishing material and erecting pressure filter plant with daily capacity of 4,000,000 gallons on Water-Works Pumping Station No. 2, on Southern Belt Railroad, about three miles from city. Plans and specifications can be obtained from General Manager, Atlanta Water-Works. All propositions to furnish filters will be subject to bond election to be held April 9; usual rights reserved.

Firearms.—Donnan Bank, No. 3 Technische Abtheilung, Belgrade, Servia, wants catalogues, prices and discounts on firearms of all kinds.

Fire-department Equipment.—Bids addressed to the Board of Awards, E. Clay Timanus, president, will be received until March 27 by the City Register, City Hall, Baltimore, Md., for furnishing three first-size piston steam fire engines of either the "Amoskeag," "La France," "Metropolitan," "Aberns" or "Nott" type; specifications furnished on application to P. W. Wilkinson, secretary Fire Department. Certified check for \$500 payable to the Mayor and City Council of Baltimore must accompany proposal for each type of engine; usual rights reserved.

Furniture Factory.—Bowling Green Furniture Manufacturing Co., Bowling Green, Ky., wants estimates on complete equipment for furniture factory.

Furniture Machinery.—Toccoa Furniture Co., W. C. Edwards, Toccoa, Ga., wants furniture machinery.

Garbage Crematory.—E. M. Byars, Drawer 29, Waco, Texas, wants to correspond with parties manufacturing and installing garbage crematories.

Gas Plant.—Bowling Green, Ky., will let franchise at front door of City Hall March 30 to the highest and best bidder for laying mains and maintaining and establishing a natural or artificial gas system; usual rights reserved. W. H. Phillips is City Clerk.

Hardware.—Donnan Bank, No. 3 Technische Abtheilung, Belgrade, Servia, wants catalogues, prices and discounts on hardware.

Heating.—See Building Note under Marshall, Texas.

Heating and Ventilating.—W. M. Kavanaugh, chairman Committee on New Buildings, Little Rock, Ark., will receive bids until March 18 for heating and ventilating the West End school building according to plans and specifications of Gibb & Sanders, architects. Certified check for \$500 payable to Little Rock School Board must accompany each bid; usual rights reserved.

Hoop Machinery.—Marshall, King & Co., Hartsville, Tenn., will need hoop machinery.

Hydraulic Rams.—South River Milling Co., R. F. D. No. 1, Salisbury, N. C., wants hydraulic rams for lifting water into tank about 100 feet high and 500 feet from the waterfall.

Hydraulic Wheel Press.—See "Machine Tools."

Ice Machinery.—Pasteurizing Dairy Creamery Co., J. B. Gasser, president, Austin, Texas, wants ice machinery. (See "Refrigerating Machinery.")

Ice Plant.—W. B. Makinson Company, Kissimmee, Fla., wants ice plant with a daily capacity of four or five tons.

Ice Plant.—T. W. Law, Bishopville, S. C., wants specifications and estimates complete for ice plant of 10 tons daily capacity.

Implement Parts.—Buchanan Plow & Implement Co., Norcross, Ga., wants heel bolts, plow cleaves, machine and cringe bolts and spring steel for quick delivery.

Laundry Machinery.—W. B. Makinson Company, Kissimmee, Fla., wants machinery for small steam laundry.

Lock Construction.—Bids will be received until May 21 at the office of State Engineers of Louisiana, Room 402 Cotton Exchange Building, New Orleans, La., for constructing a lock and approaches at the head of Bayou Lafourche, La. Information furnished by J. S. Brady, chairman executive committee, Joint Organization Atchafalaya Basin & Lafourche Levee Districts, Room 401 Cotton Exchange Building, New Orleans, La.

Lock Work.—Bids will be received until April 5 at U. S. Engineer Office, 415 Customhouse, Cincinnati, Ohio, for constructing crib work and riprap protection at lock No. 1, Big Sandy river, Catlettsburg, Ky.; information furnished on application; J. G. Warren, major, engineers.

Machine Lathe.—Wade & Sumner, Rich Square, N. C., wants second-hand machine lathe or lathe for turning iron and cutting thread, etc.

Machine Tools.—Wanted, iron planer, second-hand, good condition, medium size; hydraulic wheel and axle press, 150 to 300-ton pressure, second-hand, good condition. Address P. O. Box No. 522, Lexington, Ky.

Machinery and Supplies.—Bids will be received until April 22 at office of Purchasing Agent, Postoffice Department, Washington, D. C., for furnishing miscellaneous stationery supplies, wrapping paper, typewriters, computing machines, scales, rubber stamps and supplies, numbering machines, seals, copying presses, furniture, carpets, baskets, boxes, dry goods, twine, cordage, hardware, trucks, leather supplies, electrical supplies, paints, oils, chemicals, lumber, fuel, ice, forage, household supplies, etc., as they may be ordered by the Postoffice Department and Postal Service during the fiscal year or the four years beginning July 1, 1907, as the contracts may be awarded. Blanks for proposals with specifications and instructions to bidders will be ready for distribution on or about March 25, 1907, and will be furnished on application to the Purchasing Agent for the Postoffice Department, Washington, D. C.; G. V. L. Meyer, Postmaster-General.

Metal Work.—A. J. Bonafield, Tunnelton, W. Va., wants metal floors on metal strips; also metal stairs; for bank building.

Mill Work.—Proposals for mill work on the Georgia State building at the Jamestown Exposition are being received by John Calligan & Co., contractors, 76 Charlotte street, Norfolk, Va.

Mining Equipment.—Altoona Coal & Coke Co., T. F. Wood, president, 15 Steiner Bank Building, Birmingham, Ala., wants mine cars, rails, mine machinery and all other equipment for operating coal mine.

Oil-mill Equipment.—Hamlin Oil & Cotton Co., Hamlin, Texas, wants prices on engines, boilers, electrical equipment, building materials and machinery supplies for cotton-seed-oil mill. Address W. B. Gultar, Abilene, Texas.

Paper Mills.—Norfolk Bagging Co., 614 Citizens' Bank Building, Norfolk, Va., wants to correspond with paper mills.

Paving.—Bids will be received until March 26 at office of G. V. Berry, City Clerk, Clinton, Mo., for paving with vitrified brick three miles of streets; plans and specifications on file in City Clerk's office.

Paving.—Bids addressed to the Sewers, Sidewalks and Water Mains Committee, care of D. Bund, City Engineer, Petersburg, Va., will be received until March 22 for laying 16,000 square yards granolithic sidewalk pavement; also for from 10,000 to 20,000 square yards granolithic sidewalk pavement. Specifications can be seen at the City Engineer's office. Certified check for \$500 must accompany bid; usual rights reserved.

Piping.—Board of Water Commissioners, Park Woodward, general manager, Atlanta, Ga., will receive bids until April 10 for furnishing 14,000 feet 36-inch pipe and fittings, standard weight, class B; 4000 feet 36-inch pipe and fittings, standard weight, class A; 3750 feet 12-inch pipe and fittings, standard weight, class B; 8350 feet 10-inch pipe and fittings, standard weight, class B; 9350 feet 8-inch pipe and fittings, standard weight, class B; the 36-inch pipe and specials to be delivered on cars at any side track (that may be required at time of delivery) between No. 2 pumping station and No. 1 river pumping station. Quantities given are approximate and may be increased or diminished. Consideration of all proposals will depend on the result of bond election to be held April 9. Should issue be voted, the proposition will be considered; if not, they will not be acted on; usual rights reserved.

Plumbing.—See Building Note under Marshall, Texas.

Plumbing Supplies.—Charles A. Plunkett, Lewisburg, W. Va., wants prices on plumbing supplies.

Portable Houses.—George A. Harrell, Henderson, N. C., wants addresses of portable-house manufacturers.

Power Plant.—See "Brick Plant."

Power Plant, etc.—Bids will be received until April 2 at the office of D. W. Ross, General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., for power plant, pneumatic tools, iron, steel, track bolts and spikes, machine and carriage bolts,

nuts, washers, screws, iron pipes and fittings, valves, copper gaskets, brass blbs, anvils, track tools, blacksmith tools, saws, toe-calks, horseshoes, door hardware, shelf brackets, padlocks, handcars, corundum wheels, cotters, belt hooks, tackle blocks, paint and scrubbing brushes, brooms, flue brushes, squeegees, oilcans, canteens, salinometers, ejectors, marine clocks, leather belting, cotton duck, fire hose, chalk, borax, rubber cement, floor wax, harness soap, desks, chairs, paper, cardboard, etc. Blank forms and general information relating to circular (No. 356) obtained from office or offices of assistant purchasing agents, 24 State street, New York; Custom-house, New Orleans; 1086 North Point street, San Francisco; 409 Chamber of Commerce Building, Tacoma; also from Chief Quartermaster, Chicago; Depot Quartermaster, St. Louis; Depot Quartermaster, Jeffersonville, Ind.; and Chief Quartermaster, Atlanta, Ga.

Printing Equipment.—F. M. Pinix, Oxford, N. C., wants addresses of dealers in printing presses and printers' outfits generally.

Pump.—Norfolk Cold Storage & Ice Co., Norfolk, Va., wants a second-hand Duplex pump, size 10x12x18 or thereabout.

Pump.—See "Water-works Equipment."

Pump.—St. Petersburg, Fla., will receive bids until March 21 for furnishing and installing a pump for the city water-works; water supply, 10-inch artesian well, 439½ feet deep, water line 23 feet from surface; required minimum capacity of pump 1,000,000 gallons per 24 hours; pressure required, 80 pounds per square inch, at five different points in city, to be designated by water committee, contractor to furnish means and test. Certified check or cash deposit of \$200,000 must accompany each bid; usual rights reserved; Ed T. Lewis, chairman Water Committee; J. S. Michels, City Engineer.

Rails.—Tar River Lumber Co. of Rocky Mount, N. C., wants quotations on two to ten miles of 45-pound steel T rails, either new or relayers in No. 1 condition. State price delivered and time of earliest delivery.

Railway Equipment.—Joseph E. Bowen, 901 Bank of Commerce Building, Norfolk, Va., wants a standard-gauge railroad turntable and two small turntables for 36-inch gauge.

Railway Equipment.—Fort Smith Lumber Co., Abbott, Ark., wants one 18-ton 36-inch geared locomotive, one 20-ton standard-gauge geared locomotive, 2½ tons 35-pound new or relaying steel rails with necessary splices, 10 36-inch-gauge logging cars, and 15 standard-gauge logging cars; either new or second-hand.

Railway Equipment.—See "Mining Equipment."

Railway Equipment.—C. W. Girdlestone, Brandon, Miss., wants a geared locomotive of about 14 or 15 tons, 36-inch gauge; 40 tons of 20 or 25-pound rail; two box cars, 36-inch gauge; small 36-inch-gauge passenger coach. Will consider equipment of the above style in any odd gauge, 36-inch or over.

Railway Equipment.—John G. Duncan Company, 306 West Jackson avenue, Knoxville, Tenn., wants dealer's price and complete description of second-hand dinky locomotive, about three-foot gauge, five, six or eight tons, capable of hauling 15,000 pounds on a 2 per cent. grade; the 2 per cent. grade is only about 100 feet, balance of grade about one-half of 1 per cent.

Railway Equipment.—C. W. Girdlestone, Brandon, Miss., wants 15-ton geared locomotive of 42, 40 or 38-inch or 36-inch gauge, three logging cars of same gauge and one passenger coach of same gauge; also 40 tons of 25-pound rails. Will pay spot cash at time of inspection and take any of above odd gauge equipment provided it is a bargain.

Railway Rails.—W. W. Robertson & Co., Norfolk, Va., are in the market for a mile of 25-pound or 30-pound new or good relaying steel rail, with splice bars, bolts and spikes, to be delivered at Norfolk.

Railway Equipment.—Jos. E. Bowen, Bank of Commerce Building, Norfolk, Va., wants 50 or 60-ton Shay standard-gauge locomotive for immediate shipment.

Refrigerating Machinery.—Pasteurizing Dairy Creamery Co., J. B. Gasser, president, Austin, Texas, wants machinery for two cold-storage rooms 16x12 feet. (See "Ice Machinery.")

Road Machinery.—Kilwan-Roberts Supply Co., 409 Exchange Place, Baltimore, Md., wants steam embankment roller.

Road Machinery.—Catawba Real Estate Co., Inc., J. M. Cherry, president, Rock Hill, S. C., will purchase road and street-building apparatus.

Roofing.—Charlotte Pipe & Foundry Co., Charlotte, N. C., wants prices on carload of

Iron or steel two-and-one-half-inch standard corrugation and V-cripp roofing for prompt shipment.

Saw.—M. M. Jarman & Co., Elkhart, Va., will consider prices on stave saw.

Saw (Gln) Machinery.—A. J. Baldwin & Co., Dawson, Ga., are in the market for machinery for cutting, recutting and filing glin saws.

Sawmill.—Kilwan-Roberts Supply Co., 409 Exchange Place, Baltimore, Md., wants portable sawmill complete.

Scale.—Sabel Bros., 508 West Bay street, Jacksonville, Fla., wants second-hand track scale, delivered Jacksonville.

Sewerage System.—Henry B. F. Macfarland, Henry L. West and John Biddle, Commissioners District of Columbia, Washington, D. C., will receive bids until April 12 for constructing sewers in the District of Columbia. Forms, specifications and necessary information may be obtained at Room 43 District Building, Washington, D. C.

Sewerage System.—Board of Commissioners, Galveston, Texas, will receive bids until March 21 at office of John D. Kelley, city secretary, for constructing vitrified sewers, together with all appurtenances thereto, in accordance with plans and specifications on file in office of C. G. Wells, city engineer, which will be furnished on application. Certified check for 5 per cent. of amount of bid, payable to order of City Treasurer, must accompany each bid; usual rights reserved. H. C. Lange is commissioner of water-works and sewerage.

Silver-plating Equipment.—Eastern Carolina Silver Co., Hartsville, S. C., wants set 30-inch rolls for rolling Britannia metal, dynamos, press and all other machinery and supplies used in manufacturing silver-plated ware.

Steamfitting Supplies.—Chas. A. Plunkett, Lewisburg, W. Va., wants prices on steamfitting supplies.

Tank.—P. A. Rutledge, Opelousas, La., wants tank; prefers galvanized, with steel frame.

Tanks.—See "Water-works Equipment."

Telephone Equipment.—Johnston County Telephone Co., Smithfield, N. C., wants complete equipment for constructing telephone system.

Turntables.—See "Railway Equipment."

Water Motors.—G. I. Ragsdale, Hazlehurst, Miss., wants five-inch water motor, suitable for attachment to supply pipes from city water-works.

Water-works.—R. W. Comer, Mayor, Glasgow, Ky., will grant franchise March 30 for furnishing city with water; usual rights reserved.

Water-works.—Bids addressed to Tom Bringham, City Secretary, Houston, Texas, will be received March 25 for erecting brick or concrete chimney and brick addition to Houston water-works plant, as per plans on file in City Engineer's office. All proposals must be accompanied by certified check for \$150 if bid is on chimney only and \$300 if bid is both on chimney and addition, on any bank in Houston, payable to Mayor, with conditions; successful bidder will be required to furnish bond of not less than 25 per cent. of total amount of contract price and to complete work within 90 working days after signing of contract and approval thereof by Mayor; usual rights reserved.

Water-works Equipment.—Bids will be received at office of Constructing Quartermaster, Fort Bliss (P. O. El Paso), Texas, until June 8 for sinking a 12-inch tubular deep well, installing a deep-well pump over same, constructing deep-well pump shelter and trestle, 50,000 gallon steel tank on a 70-foot trestle and furnishing and installing two 40-horse-power boilers. Applicants for plans and specifications must enclose a signed receipt. Envelopes containing proposals should be endorsed "Proposals for Construction to Be Opened June 8, 1907," and addressed to the Constructing Quartermaster.

Woodworking Machinery.—Double Shoals Cotton Mills, Double Shoals, N. C., wants second-hand wood planer in A1 condition.

Woodworking Machinery.—See "Furniture Machinery."

Woodworking Machinery.—W. A. Carver, Rougemont, N. C., wants prices on four-sided planing machine, to plane eight inches thick, 20 to 24 inches wide.

Woodworking Machinery.—See "Hoop Machinery."

Woodworking Machinery.—L. F. Hobbs, Box 483, Norfolk Va., wants pony planer 24-inch or 26-inch by 6-inch; also 30-inch double edger; second-hand; good order.

Woodworking Machinery.—C. A. Mitchell, Millard, N. C., wants new or second-hand

MISCELLANEOUS WANTS NOT OTHERWISE CLASSIFIED.

Awnings.—Smyley Richardson, Johnston, S. C., wants addresses of manufacturers of awnings for store fronts.

Lumber.—Dublin Real Estate Co., Concord, N. C., wants prices on No. 2 dressed lumber in carload lots.

Lumber.—American Machine Co., 500 East

Main street, Louisville, Ky., wants addresses of mills handling dressed yellow-pine lumber, about three inches thick in long lengths.

Oils.—Donan Bank No. 3 Technische Abteilung, Belgrade, Servia, wants catalogues, prices and discounts on machine and mineral oils.

Stable Fixtures.—D. B. Dearing, 736 12th street, Bowling Green, Ky., will purchase a lot of feed boxes, racks and iron guards.

INDUSTRIAL NEWS OF INTEREST

Factory Building Offered.

Manufacturers who can use a factory building 60x100 feet in size, located at Charlotte, N. C., are invited to address Box 147, that city.

Lense on Invention Offered.

The owner of an invention desires to arrange for leases in eight States throughout the country. He indicates that the article is in demand. For information address J. E. Bradford, Oxford, N. C.

Big Contract for Plate Glass.

The builders of the Malson Blanche have signed a contract with the Pittsburgh Plate Glass Co. of St. Louis for the furnishing of all the glass necessary for the building. The contract amounts to \$24,383. The building is at New Orleans.

Contract for Monument Work.

Mr. A. C. Bruce, supervising architect, Atlanta, Ga., announces that the McNeal Marble Co. of Marietta, Ga., has been awarded contract at \$6900 for the John B. Gordon monument (Elbert county granite pedestal and approaches).

American Spiral Pipe Works.

The American Spiral Pipe Works of Chicago has acquired the American Forged Steel Flange Co. In addition to its full line of flanges for its own work, the American Spiral Pipe Works is now prepared to furnish steel pipe flanges for every class of work.

Big Order for Thor Tools.

A large order has just been awarded for Thor piston air drills and pneumatic hammers by the Wisconsin Engine Co. of Corliss, Wis. This company made an exhaustive test for three months of various makes before awarding this contract to the Independent Pneumatic Tool Co. of Chicago, the manufacturer of the Thor tools.

Hercules Machines for Egypt.

An order shipped on March 3, 1907, of Hercules concrete-block machines to Egypt weighed a little over 18 tons. The same week three machines were shipped to Ireland and two to Porto Rico. The Century Cement Machine Co. of Rochester, N. Y., maker of the Hercules, reports a large increase in domestic as well as foreign orders.

Arthur Koppel's San Francisco Offices

The Arthur Koppel Company of Pittsburgh, New York and other cities announces the removal of its temporary offices at 515 Market street, San Francisco, Cal., to its permanent offices at 1509-10-11 Chronicle Building, San Francisco. This company is well known for its manufacture of industrial railway equipments and other similar supplies for industrial purposes.

Will Handle Building Materials.

Manufacturers of lime, cement, plaster, laths, shingles and other kindred products used for building materials are invited to correspond with the R. O. Campbell Coal Co., No. 9 Edgewood avenue, Atlanta, Ga. The company is building a warehouse, and intends to handle building materials, which decision causes it to be in the market for prices and discounts.

Atlas Engine Works' Agency.

The Atlas Engine Works of Indianapolis, Ind., announces that the agency for its engines and boilers has been transferred to the Greensboro Supply Co. of Greensboro, N. C. Mr. George W. Pritchett, until recently vice-president of the Greensboro Boiler & Machine Co., has disposed of his interests in that company and is now connected with the Greensboro Supply Co.

Messrs. Ballinger & Perrot.

Messrs. Ballinger & Perrot, architects and engineers, 1200 Chestnut street, Philadelphia, have awarded contract to R. G. Devlin for warehouse and manufactory to be erected for Hires-Turner Glass Co.; building 131x275 feet; two stories and basement; walls of Bridgewater stone with bluestone trimmings; columns, floors and roof construc-

tion of slow-burning wood construction; windows on exposed fronts protected with wireglass in metal frames.

Teredo-Proof Paint Contracts.

An order for 25 barrels of teredo-proof paint, to be used on a dock at Tampa, Fla., has been awarded to the Teredo-Proof Paint Co., 17 Battery place, New York. This paint is to be used not only on the piling for protection against the teredo, but also for the timbers and wharf decking for protection against decay. The company has also received an order from South America and another for shipment to the Isthmian Canal Commission at Panama.

From Haines, Jones & Cadbury.

The Haines, Jones & Cadbury Company of Philadelphia says: "In speaking of our catalogue, several months ago, we said: 'Similar catalogues sent to the plumbing trade are invariably accompanied by a discount sheet, thus assuring fixed prices throughout the entire line and protecting the architect who specifies our goods.' This principle has marked such an important departure from customs now generally prevalent that we again desire to commend it to consideration."

The Phillips Tin Products.

West Virginia is becoming better known every day for its products from raw materials. In the State are numerous important enterprises, of which the Phillips Sheet & Tin Plate Co. is one. This company has an extensive plant at Clarksburg, producing annually 600,000 boxes of tinplate and using only natural gas as fuel. It makes a specialty of eight-inchterne roofing plate, and its output of this grade increased more than 100 per cent. during 1906. A large stock is carried at all times and the company makes a specialty of prompt shipments.

Important Contracts Awarded.

The Murray Engineering Co. (plant recently burned) is reconstructing and has placed entire order for leather belting with the General Engineering & Supply Co. of Washington, D. C. This company is the representative of the Jewell Belting Co., Hartford, Conn. The General Engineering & Supply Co. is in a position to handle any requirements along this line, and orders are promptly attended to. Among large orders recently received by the company was that of the Rosslyn Lumber Co., to supply the latest and most improved sawmill and power equipment for same. Electricity will be used as power.

Prompt Shipments from Pittsburgh.

The increase in production of the Pittsburgh (Pa.) Automatic Vise & Tool Co. permits the company to give immediate shipments on all orders, regardless of the size or style tool. Accordingly, the company is endeavoring to stock the branches in every city in order to overcome any delay which might be occasioned by transportation. A large shipment of vises was recently made to the Texas Central Railway Co. of Texas by the Pittsburgh Automatic Vise & Tool Co. These tools were ordered for excessive hard service which is seldom encountered around the average shop. The Pittsburgh Company, however, builds a vise specially adapted for such work and service.

Adjustable Sill, Cap and Step Mold.

Recently the Cement Machinery Co. of Jackson, Mich., was submitted by a well-known inventor a proposition for an adjustable sill, cap and step mold, which was immediately accepted. The invention is named the "Practical Adjustable Sill, Cap and Step Mold," and is now on the market. Orders for these molds, we are informed, are arriving at the Cement Machinery Co. office at the rate of on an average of 15 per day, and a glimpse at the circular pertaining to this mold indicates its practicability and wide range of work for solid concrete products. It is said that this mold is sold at a very reasonable price, and, as it can be adjusted from 72 inches down to 12 inches in length and from 5 inches to 14 inches in width, and being 8 inches high, it is adapted to the widest range of work possible.

Trying a Lubricant.

A trial of "Albany Grease" is the way to determine its merit as an ideal lubricant. This is demonstrated in letters constantly received by Messrs. Adam Cook's Sons, 313 West street, New York city, the only makers, from engineers and others. Mr. C. W. Sexton, superintendent of the Waycross (Ga.) Electric Light & Power Co., recently stated: "We have given your Albany grease a good, fair trial and have found it the best grease we ever used. One No. 2 compression cupful of Albany grease lasted for three weeks' continuous running on the crank pin of our 18x42 Corliss ice-machine engine, running 65 revolutions per minute. We do not hesitate to recommend Albany grease to all engineers."

Tendency of Educational Institutions

As showing a tendency of educational institutions to be progressive, attention is called to an order placed by the Milwaukee School of Trades for a No. 8 Fox universal wood trimmer and for four bench-type machines. The Fox Machine Co. of Grand Rapids, Mich., received this order. It also received recently an order from the Allis Chalmers Company of Milwaukee for 43 Fox trimmers—12 of large full universal type and 31 bench machines. In the same mail with that order was another for four Fox trimmers—three bench machines and one universal type—from the Stuyvesant High School of New York. These two orders from educational institutions point to an encouraging feature in the modern industrial situation.

Rightly Roofed Buildings.

"Rightly Roofed Buildings" is the title of a handsome 60-page book just received from the Cortright Metal Roofing Co., Philadelphia, Pa. It is printed in two colors throughout, on fine coated paper, and profusely illustrated with half-tone photographs of prominent buildings covered with Cortright metal shingles. The object in issuing the book is, as the first paragraph says, to furnish an illustrated guide for the seeker of the best to be had in roofing, be it for the residence, church or school, and whether he be the architect, contractor, roofer, carpenter or owner. Everyone interested in roofing should send for this book. The articles it contains are well written and full of good ideas in regard to the roofing problem. A postal to either the Philadelphia or Chicago office of the Cortright Metal Roofing Co. will bring a copy.

Economical Water Gas Manufacture.

In making water-gas from 75 to 100 per cent. more coke or anthracite is used than should theoretically be required. This is explained by the fact that an immense amount of heat is wasted to the atmosphere during the blowing-up period. The Green Fuel Economizer Co. has, however, lately installed apparatus for saving this heat; first, for preheating the air going to the gas generator, by which at least 15 per cent. of the generator coal can be saved and the blowing-up period greatly reduced, and second, for preheating the boiler feed-water, by which about 25 per cent. of the boiler coal can be saved, the net result being that the apparatus required will nearly pay for itself during the first year of use. This apparatus is described in a pamphlet the company is now issuing. Write for a copy to the offices at Matteawan, N. Y.

Mr. Robert E. Carrick.

Mr. Robert E. Carrick of Philadelphia (formerly general superintendent with Unit Concrete-Steel Frame Co., Philadelphia, and more recently with Tucker & Vinton, New York, in the capacity of general engineer) has joined the engineering corps of the General Fireproofing Co., Youngstown, Ohio. His experience has been extensive in laying out and superintending the construction of reinforced-concrete work, and with the General Fireproofing Co. his interest will be centered in the sale and installation of pin-connected girder frames. The type of the girder reinforcement developed in this product is claimed by the General Fireproofing Co. to possess an exclusive feature, in that it provides a complete mechanical tie by a link and pin connection over each column or beam intersection—a tie which does not in any way depend upon the adhesion of the concrete to the steel.

Jacobson Automatic Vises.

The Jacobson Machine Manufacturing Co., Warren, Pa., has completed all the arrangements providing for the transfer of its vise industry to the Rock Island Tool Co., organized at Rock Island, Ill. The Jacobson Company has established a large demand for these automatic vises, and, inasmuch as its capacity is taxed with gas and gasoline engine work, the company considers it ad-

isable to divide its trade in this way. It will retain a considerable interest in the Rock Island Lumber Co., and as those engaged in the management of the latter are accustomed to work of this kind, the Jacobson vice business will be well taken care of. The deal was negotiated through the management of the Jacobson Company, who were formerly Rock Island men. The Rock Island Lumber Co. is fully prepared to meet the demands of its customers before April 1.

Mr. A. S. Stansill, Machinery.

Steady in manufacturing activity are bringing many orders for machinery to C. Stansill of 404 Terry Building, Roanoke, Va. His recent sales include contractors' engine for J. F. Barber, Roanoke; generator engine for W. O. Lipscomb Construction Co., Moneta, Va.; McKlermen rock drills for Vaughan Construction Co., Thaxton, Va.; two complete tunnel air-compressor plants for J. C. Zobrist Company, Welch, W. Va.; and Vaughan Construction Co., Roderfeld, W. Va.; rock drills and equipment for Roanoke (Va.) Bridge Co. Mr. Stansill has lately closed an agency arrangement with the Blakeslee Manufacturing Co., DeQuoin, Ill., and already has made a good record by selling 11 Blakeslee pumps. Among other Stansill sales were Pittsburg feed-water heaters, one each to J. C. Zobrist Company, Welch, W. Va.; Vaughan Construction Co., Roderfeld, W. Va.; Hygienic Ice & Cold Storage Co., Pulaski, Va., and A. E. Elevier, Lynchburg, Va.

Mr. J. F. W. Bunsen.

Mr. J. F. W. Bunsen has entered the employ of Muralt & Co., engineers and contractors, New York, and will take charge of their Southern office in Charleston, S. C. He has had many years' experience in designing and erecting important engineering works. At the time of the Galveston flood Mr. Bunsen was mechanical superintendent of the American Cotton Co., Southern district, and was delegated by Galveston city to prepare designs and plans for breakwaters. Although his plans were not immediately used, the present admirable breakwater system has been built practically in accordance with his ideas. Mr. Bunsen's experience includes breweries, sugar refineries, spinning mills and electric-light and power plants, oil refineries for Standard Oil Co. in Mexico and South America, cotton mills for American Cotton Co. and sugar plants in Cuba, Mexico and South America. Messrs. Muralt & Co. are now building a large power plant for the United States Government at Charleston navy-yard.

National Association Hosiery Manufacturers.

Mr. C. B. Carter, secretary of the National Association of Hosiery Manufacturers, Drexel Building, Philadelphia, Pa., announces the appointment of committee to assist in making a success of the coming exhibition and convention. The committee is composed of Messrs. F. L. Chipman, president Charles Chipman's Sons, Easton, Pa.; P. C. Withers, Royal Knitting Co., Mt. Vernon, Ill.; Isaac Mossop, Isaac Mossop & Co., Wisconsin, Pa.; C. B. Carter, secretary-treasurer, 439 Drexel Building, Philadelphia; J. H. McPhail, Nashville (Tenn.) Hosiery Mills; M. S. Gabriel, Gabriel Hosiery Co., Coopersburg, Pa.; Garnett Andrews, Richmond Hosiery Mills, Chattanooga, Tenn.; Fred W. Simons, Simons & Struve Hosiery Co., Frankford, Philadelphia; F. J. Thieme, Wayne Knitting Mills, Fort Wayne, Ind.; C. M. Carr, Durham (N. C.) Hosiery Mills; W. B. Johnson, Unaka Knitting Mills, Johnson City, Tenn.; A. W. McLean, A. W. Mills, New Orleans; Harold Lamb, Union Manufacturing Co., Union Point, Ga.; B. A. V. Parker, Parker Hosiery Mill and Dye Works, Portsmouth, Va.; W. T. Buck, Thomas & Co., Buck Hosiery Co., Philadelphia, Pa.; W. L. Fay, Fay Stocking Co., Elyria, Ohio; S. H. Welchenmayer, Blue Ridge Knitting Co., Hagerstown, Md.; W. H. Johnston, Jefferson Hosiery Mills, Birmingham, Ala.; D. L. Galbraith, World's Star Knitting Co., Bay City, Mich.; J. A. O'Connell, Marion Hosiery Mills, Philadelphia, Pa.; F. C. Aberle, Harry C. Aberle & Co., Philadelphia, Pa., and E. B. Gaylord, Winsted Hosiery Co., Winsted, Conn.

TRADE LITERATURE.

Penberthy Engineer and Fireman.

For February, 1907, the Penberthy Engineer and Fireman contains a number of interesting articles, including references to calculations of boiler stays, compound generators run in parallel, valve setting, lubricating troubles and others of a timely nature. This monthly is published by the Penberthy Injector Co., manufacturer of the well-known Penberthy injector. Write the offices at Detroit, Mich.

The Nernst Glow.

In the February issue of the Nernst Glow are several special features to which attention is called by the publisher. They refer to how to increase profits with the Nernst lamp, and will interest managers of various classes of industrial enterprises where electric lighting has been adopted. The Nernst Lamp Co. of Pittsburgh, Pa., publishes the Nernst Glow.

Chimney Plans and Bids Accepted.

Those interested in modern chimney construction are advised that George T. Prince, chief engineer of the Denver Union Water Co., Denver, Col., has accepted plans and bids for the construction of two radial brick chimneys, submitted by the Heine Chimney Co. of Chicago, Pittsburg and Kansas City. These stacks will be 103 by 4 and 112 by 5 feet 6 inches, respectively. The Denver company has two large pumping stations under construction and is expending \$1,000,000 for improvements.

Of Interest to Plumbers.

The latest advertising literature issued by the Haines, Jones & Cadbury Company is of especial interest to plumbers. It states that no plumber can have a worthier ambition than to enjoy a strong and permanent prestige among the best class of trade. But ambition must be backed up by achievement, and the company says these can both be realized by using its "H. J. & C." guaranteed fixtures. Address the Haines, Jones & Cadbury Company at 1130 Ridge avenue, Philadelphia, for copies of its catalogue.

Steel-Wire Brushes.

Owing to the increased use of brushes in modern industries, the manufacture of steel-wire brushes has assumed great proportions. Various-shaped brushes are now on the market to answer the varying needs of many trades. The manufacture of this class of brushes is a specialty of the American Wire Brush Co., 25 Broad street, New York. The company states that its brushes have bristles linked to foundation, thus following surface to be treated, with the effect of an elastic back brush at a low price. The features of these brushes are said to be great efficiency, small effort, least waste, no broken or inactive wires, and durability. An illustrated descriptive leaflet can be obtained on request.

Harry Bros. Company.

One of the many kinds of manufactured products in large demand because of the active developments now in progress in the South is comprised in corrugated galvanized-steel tanks, cisterns, culverts, barrels, buckets, etc. The manufacture of these articles is a specialty of the Harry Bros. Company, New Orleans, La., and Dallas, Texas. The company has a large and modern plant wherein it builds cisterns and tanks for all purposes up to 100,000 gallons capacity. It uses selected materials, corrugates for strength, galvanizes for life, and correctly constructs its tanks so that they are strong and durable. The Harry Bros.' catalogue is now being circulated, and it contains useful data for those who may be considering the purchase of tanks, barrels, oil cans, well buckets, etc.

Forms for Concrete Construction.

The attention now being given to concrete construction of all kinds makes it pertinent and timely to call attention to the publication, in bulletin form, of the paper entitled "Forms for Concrete Construction" read before the Third Annual Convention of the National Association of Cement Users. This paper was written and read by Sanford E. Thompson, member American Association Consulting Engineers, consulting engineer, Newton Highlands, Mass. This bulletin refers to recent failures in reinforced construction and points out the way to prevent a recurrence of them. It deals with the subject in a detailed manner, and presents interesting photographic views and diagrams indicating how concrete construction should be done in order to secure the best possible results and utilize to the fullest extent the advantages which such construction warrants.

American Wire Rope News.

One of the most interesting of recently issued trade publications is the American Wire Rope News for January, 1907. It contains, among other timely articles, a story of the perils in the Gloucester fisheries off the Massachusetts coast, with especial reference to the vessels made perfect in rigging and hulls by generations of experience. American wire rope being used. Details of the wire rigging employed by the masters of the boats are presented. Another article tells how elevator rope is treated.

This information is emphasized by an account of elevator rope used continuously for 12 years in The Rookery, Chicago, and still in fine shape for further long service. Another article is entitled "Wire Rope Versus Chain." The American Steel Wire Co., The Rookery, Chicago, Ill., publishes the American Wire Rope News in the interest of its product.

Steam and Hot Water Boilers.

The popularity of steam and hot-water heating equipment for dwellings and other classes of buildings increases from year to year. As people become acquainted by experience with the excellent results obtained from the installation of either one of these systems they recommend them to others who may have the purchase of heating plants under consideration. But whether it is steam or hot-water apparatus that has been ordered, the entire equipment, more especially the boiler, must be such as to insure the highest results as to economy and efficiency. Mahony boilers for steam or hot water have earned an enviable reputation in this direction. They are described in detail in an illustrated booklet now being distributed and copies of which can be obtained on application. Address the Mahony Heating, Ventilating & Blower Co., the manufacturer of the Mahony boiler, Troy, N. Y.

Saunders' Pipe-Threading Machinery.

All who are interested in the working of wrought-iron and steel pipe and other metal-working operations are invited to examine the 1907 catalogue of D. Saunders' Sons. This illustrated catalogue and price-list of the Saunders tools is replete with photographic views of the various tools and machines manufactured by the company. These products include pipe threading and cutting machines for steam and gas fitters' use, special machines for pipe mills, tapping and drilling machines, hand stocks and dies for pipe taps, reamers, tongs, hand pipe cutters, pipe vises, etc. An experience of many years, combined with most improved and extensive facilities, enables D. Saunders' Sons (Incorporated) to offer a line of machines and tools which are giving satisfaction now to numerous industrial workers and manufacturers throughout the entire industrial world. Address D. Saunders' Sons, Yonkers, N. Y.

Sturtevant Vertical Engines.

Sturtevant vertical engines of class V85 are high speed and automatic. A system of forced lubrication and the complete enclosure of the moving parts provide for continuous operation for weeks at a time without attention and insure perfect reliability even in the hands of the unskilled. This type of engine is adapted to all classes of work requiring maximum power in minimum space, a condition attained by operation at the high speed made possible by the refined design, the high-grade construction and the use of the best material. It is specially designed for the driving of direct-connected generators. Because of the large diameter and short stroke the engine develops great power and high rotative speed without excessive piston travel. Further facts, comprising a complete description, can be seen in Bulletin 125. This is issued by the B. F. Sturtevant Company, manufacturer of the engine noted, Hyde Park, Boston, Mass.

Questions and Answers from the Gas Engine.

The greatest development of the gas and gasoline engine has been within the past decade. During that time many mechanics and designers have devoted their energies to improving designs and methods of construction of engines of the internal-combustion type. Most of these men have been readers of the Gas Engine, a magazine devoted to the gas-engine industry, and many of them have asked questions which were answered in that journal by leading authorities. As it has been decided that these questions and answers have a permanent value, the majority of them have been compiled and printed in a separate volume. This volume is cloth bound, 5x7 inches, with 275 pages. Its contents relate to the design, construction, operation and repair of gas and gasoline engines for stationary, marine and automobile use. The book is published by the Gas Engine Publishing Co. of Cincinnati, Ohio, and its price is \$1.50.

Peerless Cement Brick Machine.

The activity in building operations during the past year has caused a strong demand for all classes of building material, and the demand for buildings constructed from some form of concrete has been so extraordinary as to attract universal attention. From present indications the present year will show a greater demand for cement work

than has heretofore existed. It can scarcely be denied but that cement construction is now an important factor in building operations. The Peerless Brick Machine Co. of Minneapolis, Minn., calls attention to the foregoing facts in its new catalogue describing, and is designed for one man to manufacturing the Peerless cement-brick machine. This machine is one that is offered at a medium price, and is designed for one man to manufacture regular-size brick from cement and sand and of such a nature as to be readily suitable and give general satisfaction. Numerous Peerless machines are in use throughout the country, and the 1907 model is built on the same general plan, but with slight improvements. If interested in the manufacture of cement brick, write the Peerless Brick Machine Co. for catalogue.

From Pasture to Pulley.

Few men, except those directly interested, have a full conception of the variety and magnitude of the industries directly concerned in and growing out of the hide—one of the many products of the great American cattle trade. A glance in the windows of the stores on prominent business thoroughfares in any city indicates the multitude of articles made from leather. A most important use of the hide is in the manufacture of belting for mill, factory and other industrial purposes. "From Pasture to Pulley" is an unusually interesting publication telling about the manufacture of belting. It presents a description of the manufacture of belting from the first selection of the green hides to the final finishing of the commercial product. It also contains a description of the manufacture of round belting, belting lace and oak-tanned strap leather halters, as practiced in the factories of the New York Leather Belting Co., 51 Beekman street, New York. This company's products are well known, and are becoming better known every day as their merits become better known to users of belting. The publication above mentioned tells all about the New York Leather Belting Co.'s leather belting and kindred articles, besides giving photographic views of interest in connection with same. Every user of belting should have a copy of the book.

Standard Vitrified Conduits.

The underground conduit system must, in order to be entirely satisfactory, be installed with care, and even more care must be exercised in the selection of the principal factor in an underground system—the conduit. The conduit should be an absolute insulator, impervious to moisture, proof against acids, fire and the action of the earth. These qualities must be permanent and everlasting. It is claimed that these rigid requirements are met to the greatest possible degree in the clay duct. A prominent manufacturer states that during the past year there has been about 25,000,000 feet of clay conduit laid in the United States, and this extensive consumption is pointed to as an evidence of the favor with which engineers view the clay conduit. These thoughts are prompted by a perusal of the catalogue issued by the Standard Vitrified Conduit Co., 33-41 Cortlandt street, New York. This company offers its manufacture, an improved form of single and multiple duct conduits. Its Standard vitrified conduit is manufactured from a thoroughly ground and mixed combination of stoneware clay, fire-clay and spar, being free from iron, lime or other foreign substances injurious to the finished product. The Standard catalogue tells all about the process of manufacture, presents interesting data of use to conduit builders and gives many photographic views to elucidate the text.

Baldwin Steel Co.

One of the most important industries of the rapidly-growing city of Charleston, W. Va., is the Baldwin Steel Co., which recently completed its extensive plant, taking the place of the establishment formerly operated in New York State. The company is now prepared to meet the increasing demands of its established trade, and is taking action to make known the merits of its steel products to manufacturers and others who are likely to be interested. Two excellent catalogues have just been issued to illustrate and otherwise present details in a concise manner of the Baldwin Steel Co.'s Hudson high-speed tool steel, twist drills, reamers, taps, milling cutters, high-grade tool steel and forgings, etc. Hudson tools are made under expert inspection after every operation, micrometer calipers being used throughout the factory to insure accuracy. They are uniformly hardened and tempered and guaranteed free from fire cracks. Special attention is called to Hudson reinforced high-speed steel (patented) staybolt taps, which will withstand severe torsional strains without breaking or

twisting off. Hudson turret and screw-machine tools will be found to contain advantageous facilities for users of such machines. The Baldwin Steel Co. is prepared to build special tools by blueprint or sketch. Its general offices are at 133 Reade street, New York city, with branches in Boston, Philadelphia, Chicago and Pittsburgh.

South Carolina Opportunities.

Editor Manufacturers' Record:

The Brooklyn Daily Eagle of February 24, commenting upon a resolution recently introduced in the New York Assembly, providing for the appointment of a commission to investigate the matter of abandonment of farms and the depopulation of rural districts in New York State, treats very candidly a most remarkable condition of affairs. In the course of its editorial, after describing the migration of the farming class to the more alluring environment of towns and cities, the Eagle continues: "Inability to work the farms to their full capacity and the net returns from the markets for the crops produced but little more, if any, than the cost of production, and the result was inevitable. The acreage of cultivation was yearly diminished until the stage is reached when not a farm in New York, outside of a market-garden district, can be sold for a price which is based on its productive capacity. * * *

"New York is no longer an agricultural State, either in the extent of acreage under cultivation, the value or volume of products, in relative capital invested or in the relative number of people employed. These facts are ascertained and cannot be gainsaid."

It is difficult for those in the South, so long burdened with the repute of all things antagonistic to health, wealth, happiness, or promise of any or all of these things, to realize that so great a sore as that uncovered by the Brooklyn Eagle could possibly have found inception in that milk-and-honey-laden land. In spite of the fact that we, too, have suffered through the abandonment of farms for town and city life; through the refusal to labor of an enormous class which we have in large part had to support; through inability to secure labor of any kind much of the time, our farms have grown in value, our farmers have prospered and our farm products have increased in bulk and worth to the extent of many millions of dollars. And even now we cannot say that our farms are as numerous, labor as plentiful or the burdens of misrepresentation very much lighter. What has been done in the South has been accomplished in the face not only of that which has caused the depopulation of New York's rural districts and the abandonment of its farms, but in that of other obstacles equally disconcerting and discouraging. We have seen farm labor sacrificed for city growth, but, also, both farm and city values enhanced and general conditions improved.

A study of the contrasts in effects in New York and South Carolina, for instance, can but lead to the conclusion that while man has been proposing his black shadows for the Southern section of our country's map to divert prospective settlers from it, God has been disposing matters from another point of view. Thousands of acres of idle land, capable of producing as profitably if not more so than that already under cultivation, are being rapidly taken up. And, to borrow the quotation the Eagle so aptly employs, it is but necessary "to tickle the fields with a hoe to have them laugh with a harvest." The attention of the world is being attracted to the State that can and does produce the record corn crop in one field and from two to three bales of cotton on the acre adjoining, to say nothing of the crops of other kinds, two in one

year from the same land. The ability to attend church and school and enjoy social advantages 12 months in the year, the freedom from necessity to burn hay and corn for fuel, as is done in some sections of the country; the lack of hardship among the women in their daily duties, the need for no heavy clothing, the emancipation from menace of lurking tornado or destructive blizzard, and the cheapness of living, with attendant savings in mental and bodily wear and tear—all these with better returns from energy expended are some of the things Providence has disposed for us and those others now coming to us with wonder in their faces and strange delight in work itching in their climate-hardened hands.

The Brooklyn Eagle thinks conditions in New York will right themselves. It says: "The farms near to large centers of population will be market-garden farms. In the remote districts they will be devoted to fruit raising and dairy and poultry products." Fate appears to have restricted matters somewhat. The farmer who would not be market gardener, fruit raiser or dairy and poultry producer must be content to abide disillusioned in the city and town while his depopulated and valueless acres descend in scale to weeds and tangled wilderness. Yet there is hope. Let the disillusioned not despair, be he of the city or the lonely rural district. There is the South. There are no restrictions here save those a man may rear about himself, while there is land as good, climate better, result of labor greater, cost of living less and opportunity limited only to the degree of muscle placed in play.

JOHN WOOD.

Greenville, S. C.

The Cotton Movement.

In his report for March 15, Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight for 196 days of the present season was 11,590,327 bales, an increase over the same period last year of 2,504,710 bales. The exports were 6,675,864 bales, an increase of 1,841,814 bales. The takings were: By Northern spinners, 2,075,187 bales, an increase of 236,635 bales; by Southern spinners, 1,596,060 bales, an increase of 88,817 bales.

The Louisville Exposition.

The Greater Louisville Exposition was formally opened last Monday with addresses by Governor J. C. W. Beckham, Mayor Paul Barth, President A. T. MacDonnell, Vice-President Fred Levy and Mr. William R. Clay. With the exception of exhibits by the United States Government, the exposition, designed to emphasize the idea "made in Louisville," embraces only the products of more than 400 Louisville manufacturers, artists and literati.

Of 200 youths between 16 and 21 years of age who have accepted the invitation of Mr. Charles M. Schwab to come to the Bethlehem (Pa.) Steel Works for expert training in the iron and steel trade, 52 per cent. are of German descent, 25 per cent. are of Irish descent and 20 per cent. are classed as of American descent, according to the New York Times, which says also that many of the lads hail from high schools or from manual training schools, and that nearly all of them display a notable aptitude for handling machinery.

At a recent meeting of the business men of Leesburg, Fla., it was decided to organize at once a steamboat company and as soon as possible put a boat on the Ocklawaha river for the purpose of taking care of the freight business for the town and

handling such other freight and passenger business as the line may be able to control. A committee was appointed to make certain investigations and offer any further suggestions as may appear to the committee for the good of the cause.

FINANCIAL NEWS

The MANUFACTURERS' RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office MANUFACTURERS' RECORD,
Baltimore, Md., March 20.

The course of the Baltimore stock market during the past week reflected the improvement which occurred in New York after the recent heavy decline. At the end of the period the market, while dull, was steady.

In the trading United Railways common sold from 10½ to 11½; do. trust certificates also from 10½ to 11½; United incomes from 51 to 53; do. non-assented, 69; United Funding Scrip, 80 to 82; United 4s, 84 to 87; Gas 6s, 103¾; Seaboard Company common, 19½; do. second preferred, 35 to 37; Seaboard 4s, 73 to 76½; do. 10-year 5s, 98¾ to 98; Consolidated Cotton Duck, 10½; do. preferred, 31 to 32; Cotton Duck 5s, 76½ to 80; G.-B.-S. Brewing common, 6½; do. incomes, 25; do. 1sts, 50 to 54.

Bank stock sold as follows: Mechanics', 27; Western, 37; Farmers and Merchants', 50; German-American, 110.

Fidelity & Deposit sold at 126½; United States Fidelity & Guaranty, 105 to 105½; Mercantile Trust, 122 to 120.

Other securities were traded in as follows: Atlantic Coast Line common, 106 to 104; Northern Central Railway stock, 86 to 90; do. fractions, 88 to 87½; Baltimore Brick, 4; Anacostia & Potomac 5s, 100 to 103; Western Maryland 4s, 77; West Virginia Central 6s, 104¼; Houston Oil, 6½ to 7½; Norfolk Railway & Light 5s, 97½; Merchants & Miners' Transportation Co., 230 to 250; Atlanta Consolidated Street Railway 5s, 102½ to 102; Detroit United 4½s, 87 to 86½; Atlantic Coast Line 4s, 95; Georgia Southern & Florida 5s, 109; Alabama Consolidated Coal & Iron preferred, 90; Baltimore County Water & Electric Co., 40; Charleston & West Carolina 5s, 110; Western Maryland 4s, 76¾ to 77¾; City & Suburban (Washington) 5s, 101; Georgia, Carolina & Northern 5s, 107; Consolidation Coal refunding 4½s, 94; Charleston Consolidated Electric 5s, 91¾; City & Suburban (Baltimore) 5s, 108; Baltimore, Sparrows Point & Chesapeake 4½s, 92½; Central Railway (Baltimore) 5s, 110; Baltimore City 3½s, 1940, 100.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended
March 20, 1907.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast.....	100	105¼	106
Atlantic Coast of Connecticut.....	100	245	290
Georgia Southern & Florida.....	100	30	35
Georgia Sou. & Fla. 1st Pfd.....	100	95	100
Seaboard Company Common.....	100	19	19½
Seaboard Company 2d Pfd.....	100	35	42
United Railways & Elec. Co.....	50	11	11½

Bank Stocks.	Par.	Bid.	Asked.
Citizens' National Bank.....	10	30	32
Commer. & Par. White Cfs.....	100	116½	120
Drovers & Mech. Natl. Bank.....	100	255	260
Farmers & Mer. Natl. Bank.....	40	100	105
First National Bank.....	100	140	145
German Bank.....	100	103	106
Merchants' National Bank.....	100	174	175
National Bank of Commerce.....	15	30½	32
National Exchange Bank.....	100	170	185
National Howard Bank.....	10	12½	13
National Marine Bank.....	30	38	40
National Mechanics' Bank.....	10	26	28
National Union Bank of Md.....	100	114	115
Third National Bank.....	100	106	110
Western National Bank.....	20	37	40

Trust, Fidelity and Casualty Stocks.	Par.	Bid.	Asked.
Fidelity & Deposit.....	50	126	130
International Trust.....	100	141½	145

Maryland Casualty.....	25	64
Mercantile Trust & Deposit.....	50	125
U. S. Fidelity & Guaranty.....	100	106

Miscellaneous Stocks.

Ala. Con. Coal & Iron Pfd.....	100	89	90
Ala. Con. Cotton Duck Common.....	50	10	11
Ala. Con. Cotton Duck Pfd, ext. div.....	50	30	31
Consolidation Coal.....	100	89	91½
G.-B.-S. Brewing Co.....	100	6	7
George's Creek Coal.....	100	78	80
Mer. & Miners' Trans. Co.....	100	235	250

Railroad Bonds.

Albany & Northern 5s, 1946.....	95	100
Atlanta & Charlotte Ext. 4½s.....	100	100
Atlantic Coast Line 1st 4s, 1952.....	94½	95
Atlantic Coast Line 4s, Cfs., 1952.....	89	89
Atlan. Coast Line (S. C.) 4s, 1948.....	99	99
Carolina Central 4s, 1949.....	92	92
Charleston & West. Car. 5s, 1946.....	110	111
Coal & Iron Railway 5s, 1920.....	100	100
Columbia & Greenville 1st 5s, 1918.....	111	112½
Georgia & Alabama 5s, 1945.....	105	106
Georgia, Car. & North. 1st 5s, 1929.....	106½	107
Georgia Sou. & Fla. 1st 5s, 1945.....	109	110
Piedmont & Cum. 1st 5s, 1911.....	102	102½
Seaboard Air Line 4s, 1950.....	76	77
Seaboard Air Line 5s, 10-year, 1911.....	98	99½
Western Maryland new 4s, 1952.....	76½	77½
West. Va. Central 1st 6s, 1911.....	104½	105½
Wilmington & Wel. Gold 5s, 1935.....	114	114

Street Railway Bonds.

Anacostia & Potomac 5s, 1949.....	101	102½
Atlanta Con. Street Rwy. 5s.....	102	102½
Augusta Rwy. & Elec. 5s, 1940.....	100	100
Central Ry. Con. 5s (Balto.), 1932.....	110	110
Charleston City Rwy. 5s, 1923.....	106	106
Charleston Con. Elec. 5s, 1969.....	91	92
City & Suburban 5s (Balto.), 1922.....	108	108½
City & Suburban 5s (Wash.), 1945.....	100¾	101
Knoxville Traction 1st 5s, 1928.....	106	106
Lake Roland Elev. 5s, 1942.....	110½	113
Lexington Rwy. 1st 5s, 1949.....	39½	40
Macon Ry. & Lt. 1st Con. 5s, 1953.....	99	99
Metropolitan 5s (Wash.), 1925.....	110	110
Newport News & Old Pt. 5s, 1938.....	90	95
Norfolk Railway & Light 5s.....	97½	97½
United Railways 1st 4s, 1949.....	86¾	87
United Railways Inc. 4s, 1949.....	62	62½
United Railways Inc. 4s, non-as.....	66	72
United Railways Funding 5s.....	80	83

Miscellaneous Bonds.

Ala. Con. Coal & Iron 5s.....	91	91
Consolidated Gas 6s, 1910.....	103½	104
Consolidated Gas 5s, 1939.....	109¼	109¼
Con. Gas, Elec. Lt. & Power 4½s.....	82½	82½
G.-B.-S. Brewing 1sts.....	52½	53½
G.-B.-S. Brewing 2d Inc.....	24	25½
Maryland Telephone 5s.....	91	91
Mt. V. & Woodberry Cot. Duck 5s.....	78¾	79

Seeking Location for Bank.

The MANUFACTURERS' RECORD is advised regarding an opportunity for some growing Southern city that needs a bank to secure such an institution. It is informed that a certain capitalist wishes to establish a bank at some point where there are from 1000 to 1500 inhabitants, even if one other bank is already established. If there are less than 2000 inhabitants he would not wish his bank to be the third one. A capitalization of from \$40,000 to \$50,000 is contemplated. Industrial organizations or other interests interested can obtain particulars by addressing P. O. Box 93, Alexander City, Ala.

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending March 18.

	Par.	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	91	85	88
Aiken Mfg. Co. (S. C.).....	85	88	90
Anderson Cotton Mills (S. C.).....	94	94	94
Arkwright Mills (S. C.).....	112½	115	115
Augusta Factory (Ga.).....	80	85	85
Augusta Mills (Ala.).....	112	116	116
Benton Mills (S. C.).....	106	110	110
Bibb Mfg. Co. (Ga.).....	113½	113½	113½
Brandon Mills (S. C.).....	122	126	126
Cabarrus Cot. Mills (N. C.), new.....	120	130	130
Chadwick Mfg. Co. (S. C.) Pfd.....	100	100	100
Chiquola Mfg. Co. (S. C.).....	100½	101½	101½
Clifton Mfg. Co. (S. C.).....	115	117½	117½
Clifton Mfg. Co. (S. C.) Pfd.....	103	103	103
Columbus Mfg. Co. (Ga.).....	150	150	150
Columbus Mfg. Co. (Ga.) Pfd.....	96	101	101
Courtenay Mfg. Co. (S. C.).....	94	94	94
Dallas Mfg. Co. (Ala.).....	84	84	84
Darlington Mfg. Co. (S. C.).....	80	85½	85½
Eagle & Phenix Mills (Ga.).....	130	135	135
Easley Cotton Mills (S. C.).....	132	134	134
Enoree Mfg. Co. (S. C.).....	90	90	90
Enoree Mfg. Co. (S. C.) Pfd.....	100½	100½	100½
Enterprise Mfg. Co. (Ga.).....	94	94	94
Exposition Cotton Mills (Ga.).....	200	200	200
Gaffney Mfg. Co. (S. C.).....	95	96	96
Gainesville Cotton Mills (S. C.).....	55	55	55
Granby Cot. Mills (S. C.) 1st Pfd.....	50	55	55
Grantville Mfg. Co. (Ga.).....	165	165	165
Greenwood Cotton Mills (S. C.).....	93	96	96
Grendel Mills (S. C.).....	115	120	120
Henrietta Mills (N. C.).....	105	105	105
King Mfg. Co., John P. (S. C.).....	105	103	103
Lancaster Cotton Mills (S. C.).....	105	107	107
Lancaster Cot. Mills (S. C.) Pfd.....	98	98½	98½
Langley Mfg. Co. (S. C.).....	92	96	96
Laurens Cotton Mills (S. C.).....	160	160	160
Limestone Mills (S. C.).....	120	123	123
Lockhart Mills (S. C.).....	99	102	102
Lockhart Mills (S. C.) Pfd.....	97	104	104
Louise Mills (N. C.).....	90	95	95
Louise Mills (N. C.) Pfd.....	98	98	98
Mariboro Mills (S. C.).....	90	90	90
Mayo Mills (N. C.).....	165	185	185
Mills Mfg. Co. (S. C.).....	100	101	101
Mills Mfg. Co. (S. C.) Pfd.....	90	101	101
Monaghan Mills (S. C.).....	103	106	106
Monarch Cotton Mills (S. C.).....	104	105	105
Newberry Cotton Mills (S. C.).....	126	140	140
Norris Cotton Mills (S. C.).....	106	115	115
Olympia Cot. Mills (S. C.) Pfd.....	80	80	80
Orangeburg Mfg. Co. (S. C.) Pfd.....	80	87	87
Orr Cotton Mills (S. C.).....	100	102	102
Pacolet Mfg. Co. (S. C.).....	174	174	174
Pacolet Mfg. Co. (S. C.) Pfd.....	101½	103	103
Pelzer Mfg. Co. (S. C.).....	170	175	175

Piedmont Mfg. Co. (S. C.).....	170	177
Poe Mfg. Co. (S. C.).....	127	128
Richland Cot. Mills (S. C.) Pfd.....	99	99 1/2
Raleigh Cotton Mills (N. C.).....	99	106
Roanoke Mills (N. C.).....	110	140
Saxon Mills (S. C.).....	110	130
Sibley Mfg. Co. (Ga.).....	63	65
Spartan Mills (S. C.).....	150	150
Springstein Mills (S. C.).....	100	100
Trion Mfg. Co. (S. C.).....	130	142
Tucapau Mills (S. C.).....	180	200
Union-Buffalo Cot. Mills 1st Pfd.....	90	70
Victor Mfg. Co. (S. C.).....	120	70
Warren Mfg. Co. (S. C.).....	96	98
Warren Mfg. Co. (S. C.) Pfd.....	105	105
Washington Mills (Va.).....	28	28
Washington Mills (Va.) Pfd.....	100	115
Whitney Mfg. Co. (S. C.).....	145	160
Wiscasset Mills (N. C.).....	122	125
Woodruff Cotton Mills (S. C.).....	126	130

Quotations Furnished by William S. Glenn, Broker, Spartanburg, S. C., for Week Ending March 18.

Abbeville Cotton Mills (S. C.).....	95	95
Aetna Cotton Mills (S. C.) Pfd.....	79	79
Aiken Mfg. Co. (S. C.).....	82	80
American Spinning Co. (S. C.).....	122	125
Anderson Cotton Mills (S. C.).....	100	100
Arcadia Mills (S. C.).....	95	96
Arkwright Cotton Mills (S. C.).....	112	112
Augusta Factory (Ga.).....	80	85
Avondale Mills (Ala.).....	110	110
Belton Mills (S. C.).....	104	108
Bibb Mfg. Co. (Ga.).....	104	115
Brandon Mills (S. C.).....	128	128
Brogan Mills (S. C.).....	52	62
Cabarrus Cotton Mills (N. C.).....	120	120
Chadwick Mfg. Co. (N. C.) Pfd.....	103	103
Chiquola Mfg. Co. (S. C.).....	101	103
Clifton Mfg. Co. (S. C.).....	115	120
Clifton Mfg. Co. (S. C.) Pfd.....	103	103
Clinton Cotton Mills (S. C.).....	155	155
Columbus Mfg. Co. (Ga.).....	94	97
Courtenay Mfg. Co. (S. C.).....	100	100
Dallas Mfg. Co. (S. C.).....	92	96
Darlington Mfg. Co. (S. C.).....	82	87
D. E. Converse Co. (S. C.).....	112	112
Eagle & Phenix Mills (Ga.).....	128	128
Basley Cotton Mills (S. C.).....	130	136
Enoree Mfg. Co. (S. C.).....	75	82
Enoree Mfg. Co. (S. C.) Pfd.....	100	102
Enterprise Mfg. Co. (Ga.).....	82	90
Exposition Cotton Mills (Ga.).....	174	200
Gaffney Mfg. Co. (S. C.).....	92	95
Gainesville Cotton Mills (Ga.).....	45	52
Glenwood Cotton Mills (S. C.).....	102	104
Gluck Mills (S. C.).....	94	96
Granby Cot. Mills (S. C.) 1st Pfd.....	50	50
Graniteville Mfg. Co. (S. C.).....	100	105
Greenwood Cotton Mills (S. C.).....	92	98
Grendel Mills (S. C.).....	115	115
Hartsville Cotton Mill (S. C.).....	100	103
Henrietta Mills (N. C.).....	175	175
Inman Mills (S. C.).....	98	103
King Mfg. Co. (S. C.).....	97	103
Lancaster Cotton Mills (S. C.).....	102	110
Lancaster Cot. Mills (S. C.) Pfd.....	92	99
Langley Mfg. Co. (S. C.).....	92	96
Laurens Mills (S. C.).....	152	162
Limestone Mills (S. C.).....	120	120
Lockhart Mills (S. C.).....	98	101
Lockhart Mills (S. C.) Pfd.....	101	101
Loray Cotton Mills (N. C.) Pfd.....	99	105
Louise Mills (N. C.).....	90	96
Louise Mills (N. C.) Pfd.....	102	102
Marlboro Cotton Mills (S. C.).....	90	90
Mayo Mills (N. C.).....	150	200
Mills Mfg. Co. (S. C.).....	102	102
Molloy Mfg. Co. (S. C.).....	100	100
Monaghan Mills (S. C.).....	104	107
Monarch Cotton Mills (S. C.).....	101	106
Newberry Cotton Mills (S. C.).....	127	127
Ninety-Six Cotton Mills (S. C.).....	100	100
Norris Cotton Mills (S. C.).....	106	106
Odell Mfg. Co. (N. C.).....	90	90
Orangeburg Mfg. Co. (S. C.) Pfd.....	90	90
Orr Cotton Mills (S. C.).....	100	104
Pacolet Mfg. Co. (S. C.).....	180	185
Pacolet Mfg. Co. (S. C.) Pfd.....	102	104
Pelzer Mfg. Co. (S. C.).....	167	175
Piedmont Mfg. Co. (S. C.).....	167	175
Poe Mfg. Co. (S. C.).....	125	130
Raleigh Cotton Mills (N. C.).....	100	100
Richland Cot. Mills (S. C.) Pfd.....	50	50
Roanoke Mills (N. C.).....	118	118
Saxon Mills (S. C.).....	115	115
Sibley Mfg. Co. (Ga.).....	58	63
Southern Cotton Mills (N. C.).....	152	152
Spartan Mills (S. C.).....	149	150
Springstein Mills (S. C.).....	100	100
Trion Mfg. Co. (Ga.).....	132	140
Tucapau Mills (S. C.).....	185	185
Union-Buffalo 1st Pfd.....	72	75
Union-Buffalo 2d Pfd.....	25	30
Victor Mfg. Co. (S. C.).....	115	115
Warren Mfg. Co. (S. C.).....	97	100
Warren Mfg. Co. (S. C.) Pfd.....	106	107
Washington Mills (Va.).....	25	25
Washington Mills (Va.) Pfd.....	100	106
Whitney Mfg. Co. (S. C.).....	150	150
Wiscasset Mills (N. C.).....	119	119
Woodruff Cotton Mills (S. C.).....	127	132

United States Steel Report.

The fifth annual report of the United States Steel Corporation for the fiscal year ended December 31, 1906, shows: Net earnings, \$156,624,273; increase, as compared with 1905, \$36,836,614. After appropriations for sinking funds on the bonds of subsidiary companies, depreciation and extinguishment funds, extraordinary replacement funds and special replacement and improvement funds there was left a balance of net earnings for the year of \$125,966,938, an increase of \$29,531,342. After the payment of interest on U. S. Steel Corporation bonds outstanding, payment to sinking funds on such bonds, interest on bonds in sinking fund and installments there was left \$98,219,088, increase \$29,534,342. After charging off \$90,501 for various accounts and investments and the payment of 7 per cent. dividend on the preferred stock and 2 per cent. on the common stock there

was left a surplus net income of \$62,742,859, an increase of \$19,377,044. Out of this appropriations have been made on account of expenditures for additional property and construction and for the discharge of capital obligations amounting to a total of \$28,500,000, and also for authorized appropriation and expenditures on account of the construction of the plant at Gary, Ind., this amounting to \$21,500,000. The balance of surplus is therefore \$12,742,859, a decrease of \$4,322,955.

The general profit and loss account shows that the gross sales and earnings of the company during the year amounted to \$696,756,926, and that the manufacturing and producing cost and operating expenses (including charges for ordinary maintenance and repairs, approximately \$29,000,000) amounted to \$517,083,955. Other receipts brought the total income up to \$188,832,834. From this were deducted \$22,907,679 for general expenses, including the cost of administration, sales, taxes, etc., besides commercial discounts and interest. This left a balance of income of \$165,925,155. From this were deducted interest charges on bonds and mortgages of subsidiary companies, interest on bills payable, etc., and profits earned by subsidiary companies, which left the net earnings for the year, as shown in the income account, at \$156,624,273.

Bankers' Conventions.

The annual convention of the Arkansas Bankers' Association is to be held at Little Rock April 25 and 26.

The Mississippi Bankers' Convention is to be held at Gulfport May 8 and 9.

The Missouri Bankers' Convention is to be held at Kansas City May 22 and 23.

The annual convention of the Oklahoma-Indian Territory bankers will be held at Chickasha, I. T., May 24 and 25.

The South Carolina Bankers' Association will hold its annual convention at Isle of Palms, near Charleston, June 25, 26 and 27.

New Corporations.

It is reported that a bank is to be organized at Zephyr, Texas, with O. D. Couch as president.

It is reported that a building and loan association is being organized at Beaumont, Texas, by Thomas Brown, a local capitalist.

The People's Bank of Fairfax, Mo., capital \$15,000, has been incorporated by R. M. Poulin, H. B. Bell, A. R. Spicer and others.

A new State bank with \$15,000 capital is reported organized at Boyce, Va., among those interested being George B. Harrison and M. L. P. Reed.

The Bank of Beulah at Beulah, Miss., has been incorporated with \$10,000 capital by W. T. Cassity, W. E. Courson, J. B. Bond and others.

The Bank of Mantee at Mantee, Miss., capital \$25,000, has been incorporated by A. C. Ball, J. E. Loban, S. J. Gullette, W. E. Skelton and others.

The Bank of Hamilton at Hamilton, N. C., has been incorporated with \$25,000 capital by T. B. Slade, W. L. Sherrod, Harry Waldo and others.

Reports state that S. J. Snook, cashier of the Capital City Bank of Jackson, Miss., will establish a bank at Shreveport, La., with \$300,000 capital.

The First State Bank of Sulphur Bluff, Texas, has been incorporated with \$20,000 capital by George Stephens, Ed. Hargrave, C. H. Mahaffey and others.

The First State Bank of Ira, Texas, has been incorporated with \$10,000 capital by G. A. Autrey, T. C. Stinson, I. L. Hicks, F. J. Grayham and O. P. Thone.

The Merchants and Planters' Bank is to begin business about May 1 with Dr. W. F. Golden, president, and E. R. Ayers, cashier. The bank has \$30,000 capital.

The Bank of Chapin at Chapin, S. C., has been granted a commission, capital \$10,000. The petitioners are J. S. Wessinger, P. M. Frink and J. T. Huneycut.

A banking and bonding company with \$200,000 capital is reported organized at Harrisonburg, Va. Thompson Lennig was elected president and E. D. Ott secretary.

The Planters' Bank at Littleton, N. C., is to begin business about April 10 with T. J. Miles, president, and Paul Garrett, vice-president. Cashier has not yet been elected.

The First National Bank of Silverton, Texas, has been approved; capital \$30,000. The organizers are John Burson, J. M. Oakes, D. C. Lowe, John A. Bain and Z. E. Fogerson.

The Elks Trust Co. at Chattanooga, Tenn., will make application for a charter. The incorporators are Charles Reif, Sol Moyes, John Stagmaier, Henry Rose and Lewis Coleman.

The Pembroke National Bank of Pembroke, Ga., has been approved; capital \$25,000. The organizers are J. O. Strickland, J. Morgan, J. H. Harvey, T. T. Osten and M. E. Carter.

The First National Bank of Emporia, Va., capital \$40,000, has been approved. The organizers are W. R. Cato, L. I. Dobie, B. Johnson, J. D. Peebles, D. T. Prince and C. F. Johnson.

The First National Bank of Marfa, Texas, capital \$25,000, has been approved. The organizers are T. H. Beauchamp, Pecos, Texas; J. G. Love, N. D. Gage, F. W. Johnson and W. D. Cowan.

The Equity Bank & Trust Co. is reported being organized at Lexington, Ky., with \$1,000,000 capital. Among those interested are Claude Williams, Ernest and Thomas Dunlap and John Winn.

The First National Bank of Princeton, Texas, has been approved; capital \$25,000. The organizers are J. L. White, McKinney, Texas; J. S. Hearn, L. A. Scott, W. B. Newsome and J. R. Gough.

The Southern Home Insurance Co. of Bartow, Fla., has begun business. The officers are T. A. Goode, president; J. G. Boyd, first vice-president; J. W. Sample, secretary, and E. L. Wirt, treasurer.

Articles of incorporation for the First State Bank of Bedias, Texas, have been filed by Dave H. Shapira of Houston, R. E. L. Upchurch, E. M. McDonald, W. W. Williamson and E. L. Hall of Bedias.

The First National Bank of Dawson, Texas, capital \$25,000, has been approved. The organizers are S. W. Johnson, Corsicana, Texas; C. W. Jester, C. O. Weaver, Geo. E. Jester and A. G. Elliott.

The People's Bank & Trust Co., recently organized at Palestine, Texas, with \$100,000 capital, will, it is stated, begin business in about 30 days with Frank C. Bailey as president and V. F. Dubose cashier.

The American National Bank of Winchester, Tenn., has been approved; capital \$50,000. The organizers are Thomas B. Anderton, Emmett Cooper, Thomas H. Erwin, B. Lawton and Joshua E. Huffman.

The Bank of Brookland (P. O. New Brookland), S. C., has been granted a commission; capital \$25,000. The petitioners are Dr. F. L. Sanders, P. H. Stalling, J. L. M. Oxner, W. T. Moore and O. N. Denham.

The Terminal Investment Co., Ltd., has been organized at Monroe, La., with \$50,000 capital. The directors are John P. Parker, Sr., president; A. F. Parker, vice-president; John P. Parker, secretary; H. R. Sneed and A. H. Green.

A bank with from \$25,000 to \$50,000 capital is reported being organized at Port

Norfolk, Va., by Attorney Homer C. Sherrett, W. A. Pollard of the firm of Pollard & King, C. W. Stille, N. T. Torbert, Henry Z. Powell and Charles J. Duke.

The State Bank & Trust Co. of San Antonio, Texas, is the correct name, according to information received by the MANUFACTURERS' RECORD, of the new financial institution recently referred to as the San Antonio Bank & Trust Co.

The Tonkawa National Bank of Tonkawa, O. T., which is a conversion of the Tonkawa State Bank, capital \$25,000, has been authorized to begin business. The officers are J. Poffenberger, president; P. E. Burk, vice-president; Ben Richards, cashier.

The Ouachita Abstract & Title Guarantee Co., capital \$50,000, has been organized at Monroe, La., with the following directors: Guy P. Stubbs, president; John J. Potts, vice-president; John T. Bryant, secretary; H. D. Appar, treasurer, and Frank P. Stubbs, Jr.

The Farmers and Merchants' Bank of Cape Charles, Va., capital \$25,000 to \$50,000, has been incorporated by W. B. Wilson, president; R. D. L. Fletcher, F. T. Wilkins, R. A. Parsons, Kemper Goffigon, L. N. Willis, R. W. Nottingham, A. J. Downes, Cape Charles, Va.

The People's Savings Bank & Trust Co. of Baton Rouge, La., has begun business in the Raymond Building with \$100,000 capital. The officers are N. S. Dougherty, president; R. J. Hummel, first vice-president; W. C. Whitaker, second vice-president; Charles D. Raymond, cashier.

The Pascagoula National Bank of Moss Point, Miss., which is a conversion of the Bank of Moss Point, has been authorized to begin business with \$75,000 capital. The officers are H. C. Herring, president; A. F. Dantzer, vice-president; H. Herring, cashier; A. N. McInnis, assistant cashier.

The First State Bank of Graford, Texas, capital \$25,000, has begun business with W. R. Likes cashier. The stockholders are Cicero Smith, D. M. Howard, Marcus M. Bright, F. N. Wynn, J. L. Cunningham, John H. Eaton of Mineral Wells and R. P. Lee, C. F. McClure and J. H. Powell of Graford.

The Farmers' Bank of Butterworth, Va., capital \$10,000 to \$50,000, has been granted a charter. The incorporators are A. M. Orgain, Jr., president, Dinwiddie; M. C. Horton, vice-president, Butterworth; A. E. Richardson, D. A. Barner, John R. Stephenson, R. Butterworth, Sr., and A. G. Butterworth, Jr.

The Scottish Fire Insurance Co. of Raleigh, N. C., capital \$50,000, has begun business with Dr. J. Vance McGowan of Fayetteville, president; L. Shaw of St. Paul's, W. H. Sikes of Red Springs, J. W. Johnson of Norfolk and A. E. Rankin of Fayetteville, vice-presidents, and B. G. Harrison, secretary and treasurer.

The Laurens Street Building and Loan Association, with an authorized capital of \$250,000, has been incorporated at Baltimore, Md., by James E. Byrd, Abraham Kaufman, Benjamin F. Matthews, Simon J. Goldstein, Frederick H. Samstag, M. Maurice Meyer, J. Charles Beck, Eugene N. Baker and Sigmund Stern.

A new building and loan association has been organized at Davidson, N. C., with the following officers: Dr. T. P. Harrison, president; F. J. Knox, vice-president; W. H. Thompson, secretary and treasurer, and A. Currie attorney; Frank J. Knox, Lee Sloan, Jr., T. P. Harrison, J. W. White, John Jetton and Charles Stiles.

Reports state that the officers of the City National Bank of Nocona, Texas, recently approved, are A. A. Croxton, president; W. B. Lewis, vice-president; R. E. Croxton, cashier, and D. S. Paine, assist-

ant cashier; directors, A. A. Croxton, W. B. Lewis, J. M. Grayson, N. M. Flynt, Claude L. Goss, T. P. Paine and A. G. Flournoy.

The City Bank & Trust Co. of Linden, Ala., has been incorporated with \$100,000 capital by J. B. Merriweather, Idalene D. Lefman, M. A. Hanly, J. A. Bleuett, S. L. Poellnitz, Julia Newhouse, R. W. Watlington, S. E. Selby, J. W. Shahan, W. R. Larkin, Isidore Vley, G. T. Breitting, Rane McMillan, Hop McMillan and Hettie Schurditz.

The Citizens' National Bank of Lineville, Ala., capital \$25,000, has organized with the following directors: Dr. S. J. Gay, president; M. M. Eppes, cashier; W. D. Mitchell, Walter S. Smith, Dr. C. P. Gay, Y. C. Barfield, Dr. J. M. Barfield, J. T. Handley, A. T. Smith, J. F. Willingham and J. M. Blanks. Business is to begin about September 1.

The United States Trust Co. of Washington, D. C., has elected the following officers: Daniel N. Morgan, president; C. J. Rixey, vice-president; W. J. Oliver, second vice-president; R. W. Beall, third vice-president; Richard E. Claughton, treasurer, and James Trimble, secretary. Business is expected to begin in about 60 or 90 days. Charter has been granted.

The First State Bank of Liberty, Texas, is reported to have changed hands and reorganized with the following officers: Henry O. Ager, president; W. S. Partlow and Wirt Davis, vice-presidents, and J. W. Stubblefield, cashier; directors, H. O. Ager, W. S. Partlow, Frank Abshire, J. F. Richardson, J. O. Lacou, Dr. J. W. Lovett and Edward B. Pickett, Jr.

The Guaranty Loan, Trust & Banking Co. of Meridian, Miss., has published its charter; capital \$100,000. The incorporators are I. Marks, A. H. Cooper, C. P. Weatherbee, J. H. Wright, R. C. Carter, F. W. Williams, C. B. Team, C. C. Dunn, T. A. Barber, Joe Meyer, A. J. Lyon, O. L. McKay, M. R. Grant, B. V. White, N. G. Carter, E. S. Bostick, Dr. Cecil Chame-nois, S. A. Neville and Ike Lowi.

The St. Louis and Suburban Savings Fund, Building and Loan Association has been incorporated at St. Louis, Mo., with \$100,000 capital. Among the stockholders are J. C. Fisher, J. W. George, Gertrude Fisher, Minnie Wood, J. P. Atkins, Orpha M. Wilson, E. C. George, W. P. Stewart, C. M. Haskins, Hans Wolff, L. Falk, E. J. Fisher, J. H. Spencer, I. H. Gamble, L. A. Young, H. M. Wilson, L. K. Schuhr, W. D. Vosburg, John T. Tuohy and Charles R. Schuhr, all of St. Louis, Mo.

The Citizens' Fire Insurance Co. of Charlestown, W. Va., capital \$200,000, has completed its organization by electing the following officers: Col. R. P. Chew, president; Thornton Perry, Paul Robinson, vice-presidents; W. O. Norris, treasurer, and R. W. Alexander, secretary. Among the directors are F. W. Mish, Mayor of Hagerstown, Md.; Wm. G. Baker, Jr., Baltimore; Wm. F. Alexander, Chas. B. Alexander, Clarksburg, W. Va.; Walton Miller, Fairmont, W. Va.; H. L. Alexander, H. H. Emmert, Martinsburg; P. M. Robinson, H. B. Curtin, Chas. B. Smiley, Clarksburg, W. Va.

The Greensboro Commercial and Savings Bank of Greensboro, N. C., according to a report from there, has been chartered with \$50,000 capital, with privilege of increasing to \$125,000. The incorporators are F. B. Ricks, E. J. Stafford, W. S. Clary, B. H. Merrimon, E. H. Coapman, E. Sternberger, F. C. Boyles, G. S. Ferguson, Jr., L. A. Henley, James Bangle, T. F. Peebles, Geo. O. Hood, W. W. Briggs, Dr. B. B. Williams, Dr. C. W. Banner, Dr. W. P. Knight, Ernest Clapp, R. E. Tobin, Howard Gardner, T. J. Penn, J. L. Winningham, E. A. Brown, A. J. Klutz, Dr. J. S. Betts, J. L. Brandt and

J. H. Gilliland. F. B. Ricks is president, E. J. Stafford vice-president, F. C. Boyles cashier, I. F. Peebles assistant cashier and G. S. Ferguson, Jr., attorney.

New Securities.

Allendale, S. C.—Bids will be received by C. B. Farmer, Town Treasurer, until noon April 15 for \$10,000 of 6 per cent. school and municipal improvement bonds.

Anderson, S. C.—The city has voted to issue \$75,000 of street improvement bonds, and it is stated the securities will be floated immediately.

Bessemer, Ala.—The city is reported to have under consideration the question of holding an election to vote on \$100,000 of bonds as follows: \$25,000 for fire department, \$25,000 to liquidate the construction of the storm sewer on Second avenue and \$50,000 for school purposes.

Bevier, Mo.—It is reported that at the April election the city will vote on \$11,500 of Central High School building bonds.

Bowling Green, Ky.—Bids will be received by Geo. T. Wilson, Mayor and chairman sinking fund commission, until 2 P. M. April 10 for all or any part of \$45,000 of 4 per cent. school and City Hall bonds.

Brenham, Texas.—St. Louis parties are reported to have purchased an issue of water-works bonds.

Carthage, Mo.—The city has voted to issue \$220,000 of water-works bonds.

Camden, S. C.—The MANUFACTURERS' RECORD is informed that an election is to be held March 18 to vote on \$50,000 of 5 per cent. 20-40-year sewerage bonds. Address the Mayor.

Centralia, Mo.—Bids will be received until 7 P. M. April 2 for \$40,000 of water and \$15,000 of electric-light 4½ per cent. 5-20-year bonds. H. W. DeJaruatt is City Clerk.

Ceredo, W. Va.—The Security Savings Bank & Trust Co. of Toledo, Ohio, has purchased at a premium the \$15,000 of 6 per cent. school bonds.

Chatham, Va.—Reports state that an election is to be held to vote on bonds for new high school.

Chattanooga, Tenn.—The city has voted to issue \$100,000 of refunding, \$250,000 of street, \$350,000 of sewer, \$50,000 of park, \$200,000 of City Hall bonds and \$50,000 of fire hall bonds.

Clarksville, Tenn.—Bids will be received until noon March 28 by M. C. Northington, Mayor, for \$25,000 of 4 per cent. 5-20-year high-school bonds.

Cleburne, Texas.—It is reported that an election is to be held to vote on \$75,000 of Central High School bonds.

Cleburne, Texas.—The \$32,000 of 5 per cent. refunding bonds have been purchased at par by E. H. Rollins & Sons of Chicago.

Conway, S. C.—Bids are still being received, it is reported, for the \$30,000 of 5 per cent. 30-year public improvement bonds.

Covington, Ga.—Bids will be received by Geo. T. Smith, City Clerk, until April 1 for \$15,000 of electric-light plant and \$5000 of school-building annex 5 per cent. 30-year bonds.

Flemingsburg, Ky.—Bids will be received by H. A. Kackley, City Clerk, until noon April 1 for \$5000 of 5 per cent. 1-10-year city building bonds.

Florence, S. C.—Bids will be received by J. L. Mann, secretary Board of School Commissioners, until noon March 26 for \$35,000 of 5 per cent. school bonds.

Greensboro, N. C.—The city has voted to issue \$30,000 of school bonds. T. J. Murphy is Mayor.

Greensboro, N. C.—Bids will be received until 2.30 P. M. April 1 for \$60,000 of Guilford county highway improvement bonds. J. L. King is chairman board of highway commissioners.

Greenville, N. C.—The MANUFACTURERS' RECORD is informed that an election will soon be held to vote on \$75,000 of sewer and street bonds.

Griffin, Ga.—The MANUFACTURERS' RECORD is informed that the city has voted to issue \$65,000 of bonds for improving electric-light plant and for building water-works and sewerage system. P. S. Burney is Mayor.

Harper, Texas.—The \$3000 of school-building bonds recently voted will, it is stated, bear 4½ per cent. and run 40 years.

Hattiesburg, Miss.—Bids will be received by E. B. George, City Treasurer, until 7.30 P. M. April 2 for \$170,000 of 5 per cent. 1-20-year water-works, school, bridge and sewer bonds.

High Point, N. C.—An election is to be held April 16 to vote on \$75,000 of sewer, water and light bonds and \$50,000 in aid of the Randolph & Cumberland Railway Co. Ed. L. Ragan is clerk.

Huntsville, Mo.—Reports state that \$5000 of 5 per cent. bonds of this district have been registered.

Jefferson, S. C.—It is reported that the bill recently introduced in the Legislature providing for an issue of municipal improvement bonds failed to carry.

Jonesboro, Tenn.—The MANUFACTURERS' RECORD is informed that a bill has been introduced in the Legislature providing for \$10,000 of water-works bonds. H. C. Beauchamp is chairman of the water-works commission.

Joplin, Mo.—On March 16 an election is to be held to vote on \$50,000 of school improvement bonds.

Keyser, W. Va.—The question of issuing bonds for water-works to supply South Keyser is reported under consideration.

Kountze, Texas.—The \$28,000 of 4 per cent. 5-40-year Hardin county courthouse bonds have been purchased by the State school fund.

Krebs, I. T.—The city recently voted to issue \$7500 of 6 per cent. 30-year school bonds.

Laredo, Texas.—An election is to be held, it is reported, to vote on \$45,000 of school-building bonds.

Lumberton, N. C.—Plans are reported being made to hold an election May 15 to vote on \$25,000 of 6 per cent. 30-year school bonds.

Madison, Ga.—The city has voted to issue \$50,000 of 4½ per cent. water-works, sewer and drainage bonds.

Mangum, O. T.—The \$15,000 of 6 per cent. 20-year sewer bonds have been purchased by R. J. Edwards of Oklahoma City at a premium of \$650 and accrued interest.

Marlin, Texas.—Bids will be received until noon April 3 by I. L. Peterson, Mayor, for \$16,000 of 4 per cent. 5-40-year water-works extension bonds.

Marysville, Ky.—Reports state that preparations are being made to issue \$20,000 of 4 per cent. emergency bonds.

Milledgeville, Ga.—The election to vote on \$50,000 of paving bonds failed to carry.

Montgomery, Ala.—Ordinances have been adopted by the City Council authorizing the issue of \$44,400 of paving bonds.

Mt. Sterling, Ky.—An election is to be held to vote on \$100,000 of 30-year sewer and street bonds.

Nashville, Tenn.—Messrs. Weil, Roth & Co. have been awarded \$125,000 of 28¼-year suburban street bonds at 102.357 and \$150,000 of 30-year Commerce street extension bonds at 102.480. The securities bear 4½ per cent. interest.

Newton, Miss.—Bids will be received until 2 P. M. April 2 for \$50,000 of 5 per cent. 20-year water-works bonds. B. F. Carter is City Clerk.

Pine Bluff, Ark.—Reports state that the \$13,000 of 6 per cent. bonds of sewer district No. 9 have been sold at par.

Port Allen, La.—Bids are reported being received for \$25,000 of 5 per cent. bonds of Drainage District No. 1, West Baton Rouge parish.

Quanah, Texas.—The State Board of Education has purchased \$28,000 of 4 per cent. 40-year Hardeman county bonds.

Raleigh, N. C.—It is reported that the County Commissioners of Wake county are empowered to call an election to vote on \$300,000 of road bonds.

Rome, Ga.—An election is to be held April 16 to vote on \$175,000 of electric-light plant, sewer and paving bonds.

Scottsville, Ky.—Reports state that an election is soon to be held to vote on \$5000 of street improvement bonds.

Siloam Springs, Ark.—The question of issuing \$30,000 of school-building bonds of this district is reported under consideration.

Siloam Springs, Ark.—Reports state that \$25,000 of 6 per cent. school bonds of this district have been purchased by Henry Coppock of Kansas City.

Statesville, Ga.—An election is to be held to vote on \$300,000 of 30-year Iredell road bonds.

Sumter, S. C.—Reports state that the \$50,000 of 4½ per cent. 20-40-year sewer bonds voted last December are soon to be issued.

Sutton, W. Va.—S. A. Kean of Chicago has purchased at a premium of \$180 the \$18,000 of 5 per cent. 10-30-year paving and sewer bonds.

Sweetwater, Tenn.—Bids will be received until 7 P. M. April 1 by S. T. Jones, Mayor, for \$30,000 of water and \$10,000 of street 5 per cent. 30-year bonds.

Toccoa, Ga.—Messrs. Spitzer & Co. of Toledo have purchased at private sale \$40,000 of courthouse and \$10,000 of jail 5 per cent. bonds.

Torras, La.—Bids will be received until 10 A. M. April 27 for \$25,000 of 5 per cent. 18-year second drainage district bonds of Pointe Coupee parish. M. P. Phillips is president.

Trenton, N. C.—Bids will be received until July 1 for \$10,000 of 5 per cent. Jones county bridge bonds. Address J. K. Dixon, clerk Board of County Commissioners.

Waco, Texas.—The MANUFACTURERS' RECORD is informed that on April 2 an election will be held to vote on \$20,000 of bridge, \$50,000 of school and \$50,000 of park bonds. Jas. B. Baker is Mayor.

Winchester, Tenn.—The election to vote on \$180,000 of Franklin county road bonds is to be held March 28.

Winnfield, La.—Bids will be received by C. M. Bevil, Mayor, until April 2 for \$27,500 of 5 per cent. water-works bonds.

Winnboro, La.—The Winnboro State Bank has purchased at par and accrued interest the \$18,000 of 5 per cent. Franklin parish school-building bonds.

Wynnewood, I. T.—Messrs. Welty & McMahan of Oklahoma City have been awarded the \$8000 of 5 per cent. 20-year water-works bonds.

Pulaski, Va., offers for sale \$50,000 of 5 per cent. 25-year electric power plant bonds. Address John T. Loving, Mayor. Further particulars will be found in the advertising columns.

At New Decatur, Ala., bids will be received by Samuel Blackwell, Mayor, until noon April 10 for \$25,000 of 5 per cent. 25-year schoolhouse bonds. Further particulars will be found in the advertising columns.

At Osyka, Miss., on April 2 at 8 P. M. bids will be opened and considered for \$10,000 of 6 per cent. 20-year public-school bonds. B. F. Owen is Mayor and M. B. Varnago Clerk. Further particulars will be found in the advertising columns.

The image shows a dark, heavily textured surface, likely the cover or endpaper of an old book. The texture is grainy and uneven, with many small, light-colored specks and fibers visible against the dark background. On the far left, there is a vertical strip of lighter, off-white material, which appears to be the inner hinge or spine area of the book. This strip contains some faint, illegible markings and text, possibly from a label or the book's binding. The overall appearance is aged and worn.